TECHNOLOGY DEPT.

PUBLIC LIBRARY
AUG 14 1944

'It's Important to Know In Time'

Member Associated Business Papers, Inc.; Audit Bureau of Circulations.

The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

Production Tools for Victory

AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD ★

Technical Governmental

Reentered as second-class matter October 3, 1938 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1944, by Business News Publishing Co.

'Written To Be Read on Arrival'

Issued Every Monday at 5229 Cass Ave., Detroit 2, Mich.

AUG. 14, 1944

Vol. 42, No. 16, Serial No. 804
Established 1926.

Inside Dope

By George F. Taubeneck

Election Bets
Deliberate Sabotage
Raising Strikers' Wages
Food Prices Sure To Come Down
Sane Planning for Postwar Business

Election Bets

Betting commissioners, we hear, are quoting odds of only 8 to 5 on Roosevelt, with very little activity noted so far. These are the lowest odds on Roosevelt yet; and they may go down to even money.

Up until now it has generally been conceded that Roosevelt would get the bulk of the soldier vote, and that of the soldiers' near relatives—those who would vote for FDR in the vague belief he would be able to get the war over sooner and the boys home earlier, because of his "experience."

This last wave of strikes, however, seems to have produced a marked change of opinion among these groups. Both the soldiers—who hate strikers worse than they hate Germans or Japs—and their relatives are now ready to believe that the only factor which can delay an early end to the war is more striking.

It's not only a matter of the weapons lost through strikes—bad as that is—but a matter of the encouragement it gives Hitler to hang on. To the German mind, a strike is a revolution. The logical Germans might have quit long before this, had it not been for our strikes.

Folks are wondering audibly why the President does not speak out against strikes in wartime. They angrily believe he should condemn strikers because they prolong the war. They note, then, that the CIO is taking over the Democratic party, and they begin to fear that Roosevelt has "sold out" to the CIO.

If he is the "indispensable leader," then *why doesn't he lead?*

Deliberate Sabotage

Undoubtedly our most critical war shortage is that of heavy duty tires for military trucks. Former rubber workers are being furloughed out of the Army to help the labor supply in tire factories. Recruits are frantically sought.

But the plain truth is that there's plenty of labor in the factories. The rubber workers' unions, it is alleged, simply refuse to permit their members to work more than a few hours a day. After reaching a certain prearranged quota—amounting to but a few hours of steady work—the unioneers are said to loaf the remainder of their working day.

This is known as "stretching the job out."

Yet Roosevelt and everybody else in Washington, it seems, are afraid to speak out against this practice. It will undoubtedly prolong the war, and cost lives.

A commander-in-chief should have no fear. Nor should he be the hired hand of any selfish group. The situation is just as bad as if Roosevelt would forbid our air forces to bomb Essen, Germany, because he held stock in the Krupp works there.

Raising Strikers' Wages

In return for prolonging the war through strikes and slow-downs, all union members will enjoy blanket wage raises shortly before the election, many predict.

Along about October, perhaps, Roosevelt will raise the Little Steel formula, either openly or through the subterfuges he has encouraged before.

This will give the CIO boys their

(Continued on Page 26, Column 1)

Proposed L-38 Change to Pave Way to Scheduling Civilian Items

WASHINGTON, D. C.—The fourth of the WPB "reconversion orders" scheduled to issue Aug. 15, which will permit production of civilian items where manpower and materials permit, will nominally take precedence over Limitation Order L-38, covering commercial refrigeration products, but for practical purposes, it won't mean much to producers who must use critical materials or components, Industry Advisory members were told here last month.

The proposed fourth regulation will permit WPB to grant authorizations to produce to certain manufacturers under certain conditions but will not immediately change the present level of production, Fred W. Smith of the General Industrial Equipment Division declared.

A proposed amendment to Order L-38, which is expected to issue this month, will remove the "prohibited list" as such and will establish a schedule of various classes of items against which industry will be permitted to manufacture a certain percentage.

Principal change proposed in production restrictions would be one in which permission would be given to build 25% of 1940 production of permitted items in any calendar year rather than 1/16 of 1940 production in individual quarters.

Items that have been prohibited under L-38 would be listed, with a "zero" in the percentage column; without further amendment of L-38, a percentage could be stated when a program for one of these items is approved.

In cases where programs are approved in time to begin production during the fourth quarter, the phrase "calendar year" may be changed to "any year, commencing Oct. 1," so that the full percentage authorized for 1944 might be produced during the fourth quarter.

On items where a percentage of 1940 production cannot be established because the 1940 production was not industry-wide, quotas might be assigned under specific authorization. Home and farm freezers would be among this type of item.

The Advisory Committees were also given a picture of the situation on electric motors. Shipments on AC motors are considerably late, and the backlog of orders has almost doubled in a year. Shipments have been increasing each month for some time now.

Although motor deliveries may not be sufficient to furnish all equipment that can be sold, minimum needs of the refrigeration industry should be satisfied, the WPB official stated.

OPA Establishes Price Regulations For Sales of Finished Goods By Govt.

WASHINGTON, D. C.—To govern prices on sales of surplus war property, including some consumer durable goods, by Government agencies during the reconversion period, the Office of Price Administration has issued Supplementary Order No. 94, effective Sept. 1, which establishes several optional pricing methods which may be used.

Although the order does not go into effect until Sept. 1, a Government agency may follow provisions of the new regulations before that date, if it desires.

Covered by the new order are such items as used household mechanical refrigerators, new household vacuum cleaners and attachments, used vacuum cleaners and attachments, used washing machines, and coil and flat bedsprings.

Basic policy set up for disposal of Government surplus goods, according to OPA, is not to be governed by the cost of the goods to the Government. For some goods the Government may have paid less than comparable goods cost today, either because of subsequent rise in price levels, or because the goods were purchased by the Government in a quantity large enough to warrant exceptionally low price. Similarly, for the other goods the Government may have paid unusually high prices, of necessity.

"Since the value to a private buyer is generally measured by the cost of the goods to him from customary alternative sources of supply, it seems appropriate on the one hand to permit the Government to sell for more than cost where its cost has been low and, on the other hand, to require the Government to sell at less than cost where such cost exceeds the price currently being charged by customary sources of supply," explained OPA.

There are three optional pricing methods recommended to Govern-

(Concluded on Page 4, Column 4)

Investigation of Servicing Charges In Washington, D. C., Started By OPA

WASHINGTON, D. C. — Stricter enforcement of maximum pricing regulations for appliance servicing and repairs in the District of Columbia is impending, warns the Electric Institute of Washington in a bulletin just issued to its members.

At present the district OPA office is conducting a thorough checkup of all appliance servicing agencies in this area to see that all the firms involved have filed with OPA their maximum prices and the additional information required, states the institute bulletin.

Operators of service firms are advised by the institute to file their maximum prices immediately if they have not already done so. For those firms whose pricing lists are now on file with OPA, the institute bulletin lists the following information as a check to insure each firm's supplying OPA complete data in compliance with RMPRR-165:

1. General pricing provisions permit filing of maximum prices either as actual dollar and cents charges for specific service operations or on the basis of a "pricing method" or formula which the firm used to determine its prices in March, 1942. This should include an hourly rate of charge for labor with any minimum charge per call; basis of charge for parts and materials; and any charge for traveling time. These charges should be given for each classification of customer served during 1942.

The maximum price should be established on the first of the following OPA provisions which applies to the firm:

a. The highest price at which the firm supplied the same service in March, 1942.

2. The highest price at which the firm offered to supply the same service in March, 1942.

c. The maximum price of the firm's closest competitor.

2. A service firm cannot make a higher charge for transportation costs, financing, inspection, or other similar operation than was made in

(Concluded on Page 32, Column 1)

CRMA Members See Chance Soon For More Cases

CHICAGO—Members of the Commercial Refrigerator Manufacturers' Association in their annual meeting here expressed optimism over the possibility of an early resumption of the manufacture of equipment for civilian use.

The assembled manufacturers pointing to the fact that industry products such as display cases, vegetable refrigerators, reach-ins, and the like, were recently placed on the high urgency list which is to serve as a basis for the general release program expected to issue Aug. 15. It is believed that as a result of this determination by the Office of Civilian Requirements, a resumption

(Concluded on Page 32, Column 2)

Dealers Could Equip 'Complete' Homes

NEW YORK CITY—Since 95% of the nation's builders erect less than 10 houses a year, the appliance dealer would be the one to sell appliances to most of the houses that are sold and financed "complete" with electrical appliances, it was brought out in a meeting held late in July by *Architectural Forum* magazine to discuss the "complete home program" which it is backing.

The meeting was attended by appliance manufacturers, utility company representatives, builders, and bankers.

Impetus has been given to the program by the liberal position taken

A more complete discussion of the "complete home program" involving new homes which are sold with major appliances already installed, will probably appear in the Aug. 28 issue of the News.

by FHA, the government agency which insures private mortgage funds. To date, 42 state FHA offices have declared ranges eligible for

(Concluded on Page 32, Column 3)

WLB In on Pittsburgh Servicemen's Strike

PITTSBURGH—Refrigeration service men who are members of AF of L Union Local 449 went back to work here following a week's strike the end of July, upon request of the War Labor Board, and after getting the grant of a 10 cent an hour raise and a week's vacation each working year.

The union's original demand of a raise to $1.50 an hour from $1.25, 7 cents per mile car mileage over 6 cents per mile, and two weeks' vacation, is the subject of further arbitration with the board.

During the strike Pittsburgh newspapers reported considerable losses of food through spoilage and declared that 1,350 service calls went unanswered.

The union makes its contract with the Refrigeration and Air Conditioning Contractors Association, an organization of large service contractors, and distributors and dealers that do servicing in Allegheny county.

G.H. Smith Heads Sales Of Magnavox Division

FT. WAYNE, Ind. — George H. Smith, who resigned recently as general sales manager, Edison General Electric Appliance Co., has gone with Magnavox Co. here as sales manager of the radio phonograph division.

Distribution of Motors Covered By Order L-341

Motors Obtained on Form 547 Must Be Certified as to Use

WASHINGTON, D. C.—WPB has moved to assure more equitable distribution of commercial type electric motors to war and essential civilian uses.

Users of these motors will be required in a quarterly report to WPB to state their past usage and what motors they require for future production. This will be compared with approved production schedules for motor using equipment so that essential uses can be provided for.

Experience has demonstrated that duplicate orders for electric motors have been placed from time to time and it is expected, through the use of the reporting device, that WPB

Text of Order L-341 covering the regulations governing the ordering and distribution of motors is published on page 25 of this issue.

will be able to eliminate such duplicate orders from motor manufacturers' backlogs, officials said.

The new rules, which are contained in Limitation Order L-341, stipulate that persons using more than 450 fractional horsepower motors or 75 single phase integral horsepower motors per quarter will not be permitted to accept delivery of motors if they have not filed reports on their requirements.

The new order also requires that distributors who receive motors allotted by WPB on Form WPB-547, distribute them to replacement uses and to farmers as provided for in Priorities Regulation No. 19.

It is further stipulated that any distributor who gets any commercial motors with ratings assigned on Form WPB-547 (formerly PD-1X) must not deliver any of them after Aug. 15, 1944, unless he has marked each one, before delivering it, with a stamp or durable tag firmly attached to it and containing substantially the following statement in

(Concluded on Page 32, Column 1)

R. C. Hill Directs NEWA Appliance Division

NEW YORK CITY—Robert C. "Bob" Hill has been appointed director of the Appliance Division of the National Electrical Wholesalers Association, announces Charles G. Pyle, managing director.

Mr. Hill has a broad background and experience of over 20 years in the electrical appliance field. Formerly, he was assistant to the president of the Council of Electric Operating Companies, assistant sales manager of Philadelphia Electric Co., sales manager of Allen-Ingraham Co., and field director of the Association of Electragists.

Clark Bridgman Forms Own Sales Company

CHICAGO—Clark Bridgman, who for the past nine years has been Chicago manager for the Bush Mfg. Co., manufacturers of refrigeration coils and other heat transfer products, has organized a new company under the name of Clark Bridgman Co. to handle the sale of Bush products in the Midwest territory.

Territory to be covered by Mr.

(Concluded on Page 32, Column 5)

OPPORTUNITY
for an Outstanding
MECHANICAL ENGINEER

LARGE MIDWEST FIRM noted for its outstanding developments requires services of a top-notch designer of mechanisms and mass production steel products.

Must be able to handle important design responsibilities connected with product development covering a broad field of high-grade consumer products.

Position requires mature judgment and independent ability to bring an idea through all stages of design and development up to practical and economical manufacture. He should have broad knowledge of manufacturing processes and a keen realization of cost factors.

Company management is strongly engineering-minded and provides a maximum of facilities and encouragement for this important work.

Write in detail as to your experience, education, family and draft status, and salary. Your letter will be passed on to our client immediately and will be treated in strict confidence.

(Employment subject to WMC rules.)

Henri, Hurst & McDonald, Inc.

520 North Michigan Avenue

CHICAGO 11, ILLINOIS

Werner and Dougherty Get Deepfreeze Posts

CHICAGO—E. Lynn Werner has been named advertising manager of Deepfreeze Division, Motor Products Corp., announces Howard R. Roberts, general sales manager. Mr. Werner had been with United States Advertising Corp., Chicago, for the past seven years, and previously spent 11 years in the advertising department of Swift & Co.

Capt. Charles E. Dougherty has also joined Deepfreeze as assistant to Sales Manager Roberts, after serving in various departments of the Federal government for the past 15 years.

Another addition to Deepfreeze personnel is R. E. Peterson, metallurgist in the industrial department, who comes from Massachusetts Institute of Technology.

McCarthy Heads Sales of New Castle Products

NEW CASTLE, Ind.—S. J. McCarthy has joined New Castle Products at New Castle, Ind., as general sales manager.

Mr. McCarthy formerly was sales manager of the heating division of the Norge company. He has had long experience in the appliance business, starting as service manager of the Absopure Refrigerator Co. in 1927. He joined Westinghouse in 1930 where he was employed until 1940 in kitchen planning and apartment house sales, calling on architects, builders, and contractors.

L-79 Change Affects Hot Water Tanks, Stove Repair Parts

WASHINGTON, D. C.— Hot water storage tanks and expansion tanks no longer require preference ratings for purchase by consumers, WPB announced July 31.

Action was taken to remove restrictions on the sale of hot water storage tanks because such tanks are used mainly to replace existing tanks which cannot be repaired. Large expansion tanks are used in commercial, industrial, or institutional buildings which are automatically provided with ratings under CMP regulations, WPB officials said.

The AA-3 rating assigned to sellers to enable them to purchase and maintain an inventory of equipment may no longer be used to obtain repair parts for stoves rationed by OPA, WPB said. This change was made to remove control over domestic cooking appliances and heating stoves from Order L-79, since it is intended to make L-23-c the sole controlling order.

Order L-79 which controls distribution of plumbing and heating equipment, was revised to state that low-pressure steel boilers, designed to burn gas or oil only as a fuel, do not require ratings from consumers.

Since there has been some public confusion as to the use of fuel oil and gas, L-79 has been amended to make it clear that orders issued by the Office of War Utilities and the Petroleum Administration for War control the use of these fuels.

The revised L-79 also specifies that the sale of equipment using gas as a fuel is prohibited unless the prospective purchaser has obtained a letter from the utility company which will deliver the gas, stating that the gas can be delivered.

The procedure for consumers to follow in applying for preference ratings has also been amended, WPB explained. The revision was made to make Order L-79 conform with the recent delegation of authority to the Federal Housing Administration to process applications for purchase of building products and materials for such housing projects as come under its jurisdiction.

Under the new procedure, if the equipment is to be used for residential purposes, construction, or otherwise, Form WPB-2896 should be filed with the nearest Federal Housing Administration field office.

If that equipment is to be used for commercial or industrial purposes and is construction of a type which is restricted under the construction order, L-41, Form WPB-617 should be filed with the nearest WPB field office. If not restricted under Order L-41, then Form WPB-1319 should be filed with the nearest WPB field office, it was explained.

Applications for equipment to be used for farm purposes (including farm dwellings) should be filed on Form WPB-617 with the County Agricultural Conservation Committee if the construction is of a type which is restricted under L-41. If not restricted under L-41, then Form WPB 1319 should be filed with the nearest WPB field office.

Utilities furnishing service for use by the public should apply for equipment on Form WPB-2774 with the War Production Board, Washington 25, D. C.

Stove Rationing Rules are Eased

WASHINGTON, D. C.—Because of a small increase in the supply of cooking stoves available for civilians, rationing restrictions on these stoves have been relaxed slightly.

Any person is eligible for a certificate provided he has no other means of cooking, whether or not the stove is to be used in what is considered "essential" living or working space.

This provision became effective Aug. 5, 1944.

Eligibility requirements set up at the outset of stove rationing provided a safeguard against diversion of the acutely short supply of cooking stoves for use in living or working space not considered essential, such as summer homes where the stoves would be used only during a portion of the year.

OPA also announced that conversion burners for ranges used in cooking may be obtained by dealers, distributors, and manufacturers certificate-free on and after Aug. 5, 1944. Consumers, however, continue to need ration certificates.

Comparatively few oil conversion range burner units are being manufactured and the supply now available for civilians is so small that control above the consumer level serves no useful purpose. No allowable inventories have been established for conversion burners because of the restrictions imposed on manufacture of the item, OPA said.

The effect of this action is to make it easier to obtain better distribution of the small number of conversion range burners still available.

Control at the consumer level is still necessary as a means of conserving kerosene, which is in acutely short supply.

Frozen Foods May Be Top Volume Line For General Foods

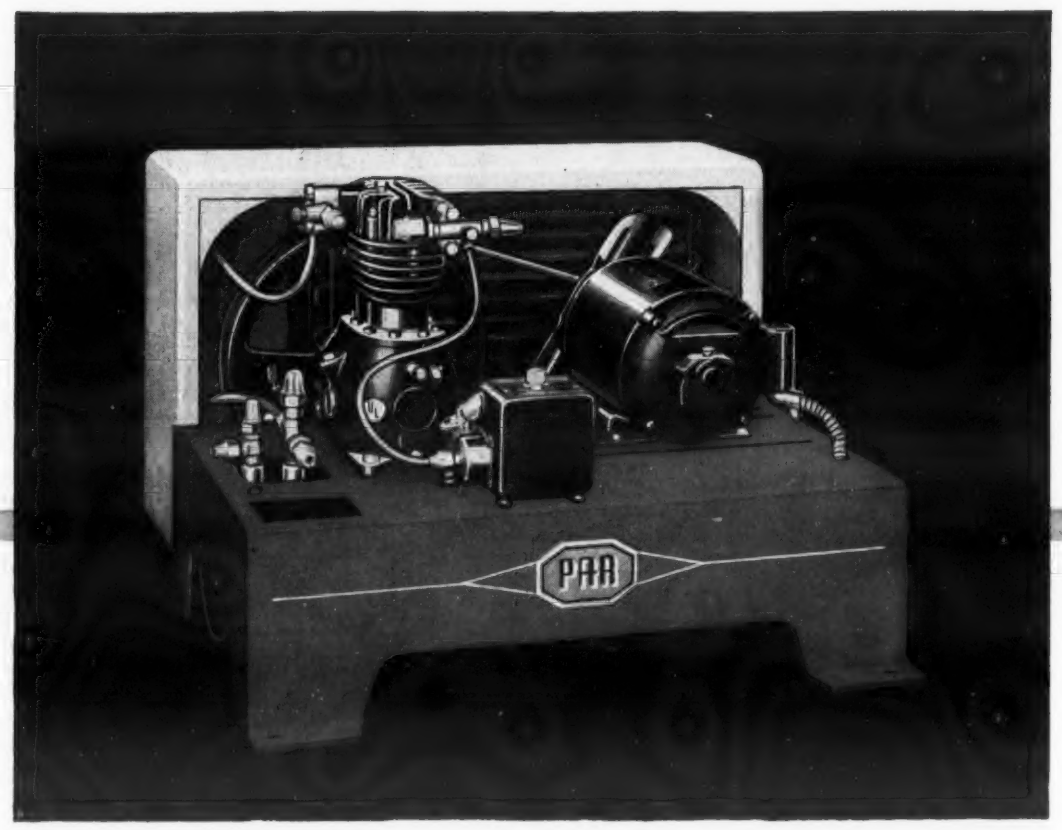
NEW YORK CITY—Expansion of the Birds Eye-Snider division of General Foods Corp. after the war is expected to find frozen foods the top volume line of the company.

Greater variety of frozen foods is contemplated by the company, and plans are said to be under way to quick-freeze an extensive line of cooked foods, permitting complete meals of frozen foods.

In addition to the expanded frozen food line, General Foods has also developed many other products for postwar expansion. These new products are expected to keep postwar business and employment above prewar levels, even though the company realizes it cannot keep up its present wartime sales. Officials see postwar sales running higher than the $153,000,000 of 1940.

Whether the company will go all-out for food dehydration is still a question. At present General Foods is dehydrating some products, chiefly potatoes, for the armed services.

The newly developed products of the company are too numerous, it is said, to be marketed all at once, as the company plans to spread their introduction over a period of years.



Par Model HA-7

- A natural for soda fountains, meat cases, walk-in coolers and small dairy coolers.
- A ¾ H.P. 2 cylinder air cooled condensing unit with large condenser and fast pump down.
- Rugged, slow speed, crank type unit, embodying the 28 out-standing PAR features including sight oil gauge.
- *Write for illustrated brochure of details.*
- *BY COMPARISON—YOU'LL BUY PAR.*

PAR Division

LYNCH MANUFACTURING CORPORATION
Defiance, Ohio, U.S.A.

Manufacturers!

Do you now have authorized service facilities in Boston and Metropolitan area? And if so, will they be satisfactory for the post war business you are planning? If not, now is the time to get set.

Our firm have been service specialists for eighteen years and serve an area of two million people. We are well financed and have competent employees and ample facilities, shop space, trucks, stock rooms, etc. to do a fine job for you. We are familiar with air conditioning, domestic and commercial refrigeration, low temperature applications, including ice cream freezing and food freezing. We can offer complete service from application engineering to warehousing, delivering, installing and servicing on all kinds of refrigeration or other major appliances. We would appreciate an opportunity to discuss the possibility of making our service department YOUR service department.

Miller & Seddon Co., Inc.

2089 Massachusetts Ave.

CAMBRIDGE, MASSACHUSETTS

Wartime
Suggestions
to help you get the most out of your Refrigerator
How to store and keep food properly under today's conditions • Easy ways to give your refrigerator the best of care • Tested recipes • Read and keep for future reference. Published for all refrigerator users by Frigidaire Division of General Motors.
Contains No Advertising (except on pages 32-33)
101
Refrigerator Helps
How to store and keep food properly under today's conditions. Easy ways to give your refrigerator the best of care. Tested recipes. Read and keep for future reference. Published for all refrigerator users by FRIGIDAIRE Division of General Motors.
Contains No Advertising (except on pages 32-33)

7,000,000
9 MO.—1943

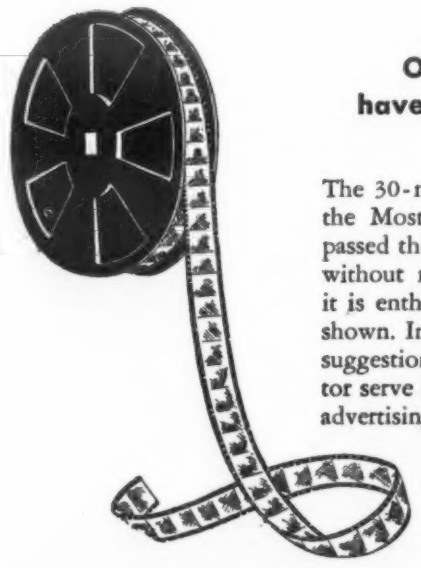
4,000,000
4 MO. ONLY—1944

11,000,000
GOODWILL BUILDERS
FOR FRIGIDAIRE DEALERS

IT'S A FACT—already over eleven million of these helpful booklets have been needed for free distribution to refrigerator users—enough for one out of every three families in the U. S.! By distributing these booklets to users of all makes, Frigidaire dealers are rendering a much appreciated wartime service.

And what is the result? Simply this—an enormous backlog of good will that will be reflected in expanded sales opportunities for Frigidaire dealers in the great peacetime future that lies ahead.

Requests are Still Pouring In! The demand for "101 Refrigerator Helps" still mounts. Frigidaire Dealers everywhere are using it to maintain their identity—offering it in window displays, in local newspaper and radio advertising. No booklets of this kind have ever received wider distribution. None has ever been more enthusiastically received by refrigerator users.



Over ½ million people have seen Frigidaire Wartime Refrigerator Film

The 30-minute talking film, "How to Get the Most out of Your Refrigerator," has passed the ½ million showing mark. Loaned without rental charge by General Motors, it is enthusiastically received wherever it is shown. In an entertaining manner, it offers suggestions on how to make your refrigerator serve better and last longer. It is not an advertising picture.

For Excellence
ARMY-NAVY E
in War Production

FRIGIDAIRE
Division of
GENERAL MOTORS
DAYTON 1, OHIO • LEASIDE 12, ONTARIO
Peacetime Builders of
ELECTRIC REFRIGERATORS • RANGES • WATER HEATERS
HOME FREEZERS • ICE CREAM CABINETS
COMMERCIAL REFRIGERATION • AIR CONDITIONERS
BEVERAGE, MILK, AND WATER COOLERS

Now With N.E.W.A.

ROBERT C. HILL

Who has just been appointed Director of the Appliance Division of the National Electrical Wholesalers Association. (See story on Page 1 of this issue.)

Bohn to South America

CHICAGO—Dick Bohn, manager of Admiral Corp.'s export division, is leaving for an extended trip through South America to sign up postwar distributors for Admiral refrigerators, home freezers, radios, and electric ranges, announced Ross D. Siragusa, president.

'Boom' in South America Attracts U. S. Exporters

Boost in Sales Should Follow Increase In Purchasing Power, Says Norge Head

DETROIT — A real estate and building "boom" of such proportions "it is reminiscent of the Florida land boom" is now in progress in most large cities of South America and is enhancing the demand for many products which will not be obtainable in quantity until after the war, said Howard E. Blood, president of the Norge Division of Borg-Warner Corp., following his return from a 17,000 mile business survey trip to the major cities of the southern continent.

Emphasizing that United States businessmen can look forward to a multitude of opportunities in South America after the war, Mr. Blood cited this real estate development as one phase of a "vast" industrial expansion which all countries of that continent are experiencing. The land "boom" is particularly notable in Sao Paulo and Rio de Janeiro in Brazil, he said.

Furthermore, Mr. Blood continued, there has developed in the last several years a "strong spirit of nationalism" in these countries with virtually everyone in government and business of the realization that the general living standard scale must be raised if improvements are to continue.

North American technical skill will be especially helpful in "streamlining" manufacturing operations of the many small firms which have sprung up during the war, most of which are operating under great difficulties, he continued.

Although products of these newer companies represent competition with existing United States trademarks in South America, it is historically true, he declared, that as a country industrializes, the overall market for North American goods increases with benefit to all.

Mr. Blood said that the United States government, according to its citizen businessmen living in South America, must take at least three steps if healthy trade relations between the two continents are to be fostered in the postwar period. These would be:

1. Move to prevent arbitrary expropriation of United Stated-owned private property;

2. Obtain assurances that United States investors would be protected from exhorbitant taxation on their share returns, and

3. Remove the United States Department of State from close association with affairs of business and set up a foreign commerce board, similar to the British Board of Trade, perhaps, to coordinate trade activities.

Howard E. Blood, president of Norge division of Borg-Warner Corp. (right) outlines postwar business possibilities in South America to other Norge officials at a meeting. Mr. Blood and R. W. Gifford, vice president and assistant general manager of Norge, and president of Borg-Warner International (left), returned recently from a 17,000-mile trip to that continent.

Profit *now* by Using Our FACTORY SERVICE PLANS for Fractional-horsepower Motors

Under these plans, General Electric will exchange or repair any inoperative G-E fractional-horsepower motor—except extremely old or obsolete models—regardless of the type or make of appliance to which it is applied. These Factory Service Plans have already proved themselves in regular use.

HOW THESE PLANS CAN HELP YOU

They will get service business for you. The fact that you can handle motor repairs promptly and satisfactorily will attract customers.

They will enable you to give *better* motor service because you can rely on the G-E factory warranty.

They will build customer confidence in your shop, because you will be able to handle the repair of practically any G-E fractional-hp motor, and return it with a new-motor warranty.

They will reduce your service expense, because all repairs on G-E fractional-hp motors will be made at the G-E factory. You will not have to increase your personnel to handle this work.

WHAT THE THREE PLANS COVER

1. THE EXCHANGE PLAN. Covers the most commonly used types of G-E fractional-hp motors. Makes possible immediate replacement, from G-E field stocks or from your own buffer stock. Replacement motors carry the G-E new-motor warranty, except for finish.

2. SPECIAL REPAIR SERVICE PLAN. Provides for factory repair of semi-standard G-E motors not covered by THE EXCHANGE PLAN, at established prices. Enables you to make quick, accurate, on-the-spot estimates. Repaired motors carry the G-E new-motor warranty, except for finish.

3. REGULAR REPAIR PLAN. Covers motors not included in either of the other two plans, except extremely old or obsolete models. Inspection is made at the factory, and a cost estimate is submitted before work is started. These motors also carry the G-E new-motor warranty, except for finish. This plan rounds out this G-E service, and enables you to handle repairs on practically any G-E fractional-hp motor.

HOW TO GET STARTED

Your distributor has, or can obtain, complete details on how to use these Factory Service Plans. Information on prices, exchange motors, stocks, and how to obtain repair service on the motors used on your line of appliances is available. See your distributor, or write for Bulletin GEA-3989, which describes these plans in more detail. *General Electric Company, Sec. B700-69, Schenectady, N. Y.*

Every week 192,000 G-E employees purchase more than a million dollars' worth of War Bonds.

MOTORS

GENERAL ELECTRIC

700-69C1-8230

Optional Methods of Pricing Surplus Goods for Gov't Sale Set Up by OPA

(Concluded from Page 1, Column 3)

ment agencies by the new OPA order.

1. The price generally charged by manufacturers to wholesalers or jobbers, or on direct sales to industrial users or retailers (which is considered the "base price").

2. The price generally charged by wholesalers or jobbers when selling to retailers or industrial users.

3. The price generally charged by retailers in sales to consumers for their personal use. This method, of course, is applicable in sales of consumer goods.

If the Government agency decides to sell at wholesale or retail prices instead of at the "base price" (see paragraph 1 above), it must be sure that the purchasers are those who customarily buy from wholesalers or jobbers, or retailers in the latter instance.

DISTINGUISHED BY QUANTITIES

In this connection it should be noted that the terms "wholesale" and "retail" are defined more by quantities than type of operation in numerous OPA price regulations, so the same definitions may apply in sales of surplus goods, if the Government agency desires.

This new price regulation not only applies to Government agencies themselves but also to contractors or subcontractors (except food) whose contracts have been terminated and who have been authorized by Government agencies to sell the surplus goods and turn the money over to the Government.

However, private sellers who buy commodities from the Government for resale are not subject to the new regulation unless their resale maximum price is set up by OPA in a separate order.

'SPECIAL' CASES PROVIDED FOR

Where one of the three pricing methods contained in the new regulation is found unsatisfactory, special price ceilings may be established either by the OPA headquarters or field offices. This latter provision should prevent questions of price ceilings from holding up sales, OPA believes.

OPA officials declared that many factors were given consideration in establishing pricing methods for surplus goods. For example:

"In the case of sales to distributors, it will operate to maintain adequate margins by requiring that sales to them reflect their lawful buying rather than selling prices. Distributors differ in their ability to absorb abnormally high prices. Some, where the supply of a commodity is tight, will regard it as advantageous to 'buy' customer goodwill by being able to supply their customers with scarce commodities even though the transaction involves no profit or loss. Under such circumstances, wherever markets are tight there is real prospect that a different price control policy would lead to an undue squeeze of distributive margins."

SALES TO INDUSTRIAL USERS

Likewise, prices charged for goods sold to industrial users affects the reconversion from war to peacetime production, believes OPA. As contract terminations increase, some industrialists will find their margins becoming too slim for comfort and will demand a boost in price ceilings. But these must be kept to "the minimum compatible with healthy production and employment," contends OPA.

Manufacturers who buy the products they produced under Government contract for resale cannot pay more for the surplus goods than their own maximum selling price, according to the new regulation. OPA points out that in this instance the manufacturer is dealing with products on which he has already, in most cases, made a profit.

EXCEPTIONS FOR INVENTORY SALES

"An exception to the provision that maximum prices in dollars-and-cents terms apply to sales by Government agencies is made in the case of sales of war contract termination inventory," states OPA. "Such inventory may be sold at not to exceed either dollars-and-cents prices or acquisition costs. This provision has been made to reduce the administrative burden on contractors and owning agencies of determining dollars-and-cents prices, and thus possibly impede the early disposal of contract termination surplus.

"In the event, however, that such sales prove to have an injurious effect upon price control in particular areas where dollars-and-cents prices are in effect, such areas will be removed from the operation of this provision."

In the sale of "heterogeneous commodities" where determination of dollars-and-cents maximum prices would be unduly difficult, a pricing method similar to the above is permissible. Ceilings can be determined for a group of new commodities on the basis of acquisition or replacement cost without reference to dollars-and-cents prices that may apply on certain items in the group. Groups of new and used, or all used, commodities may be priced at not more than 75% of acquisition cost, rules OPA.

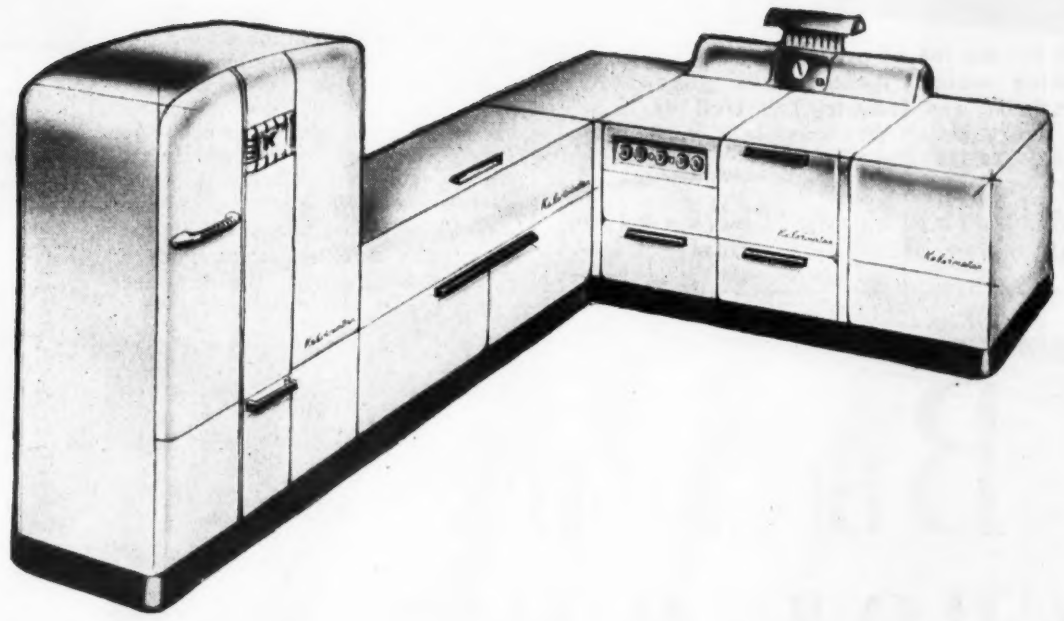
TO RELY ON CERTIFICATION

The Government agency may rely upon a certificate from the buyer that his purchase price does not exceed the maximum price applicable to purchases from usual sources of supply, in the case of commodities for which dollars-and-cents prices have been established, and all other commodities, new, used, or scrap. Of course, if the Government agency doubts the accuracy of the certificate, it should not be used. Purpose of this method, explains OPA, is to save the time the Government agency would spend in checking prices with which the buyer is familiar.

Exempt from control by this new suplementary order are sales by Government agencies: to another Government agency, any foreign government, a contractor for use in a prime contract with a Government agency, any relief organization for donation or export sale;

Of a single item or group of items where the sales price estimated to be obtainable for all substantially similar items available at the place of sale does not exceed $300; of personal property when sold with an interest in land or buildings in a single transaction; of all or substantially all the Government-owned contents of a factory or plant to the owner, lessee, or operator, or to any other single buyer purchasing for use; of building installations, facilities, appurtenances, equipment, and personal property attached to the land.

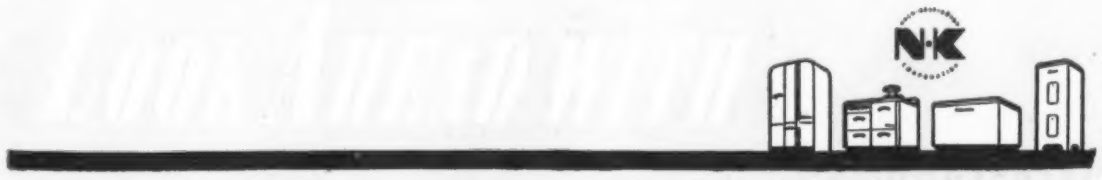
LOOKING AHEAD WITH KELVINATOR RETAILERS



Kelvinator retailers hold one of the most valuable postwar franchises in the appliance industry. Far more than a mere agreement, this is a working plan for a retailer-Kelvinator relationship that means a sound, highly profitable, long-term business future.

While full details must await the proper time, this can be said—Based on Kelvinator's long-famous "retail-minded" policies, Kelvinator's forward-looking sales strategies, selective distribution methods, and product advances . . . this franchise will enable Kelvinator and Kelvinator retailers to work closer together than ever before in attaining a common goal.

All of Kelvinator's newly acquired skills, new strength and expanded facilities greatly enhance the value of this franchise. It provides for highly profitable participation in the greatly accelerated business opportunities lying ahead for retailers of Kelvinator's postwar line of Refrigerators, Electric Ranges, Home Freezers and Electric Water Heaters!



AWARDED TO NASH-KELVINATOR CORPORATION, PROPELLER DIVISION

DIVISION OF NASH-KELVINATOR CORPORATION

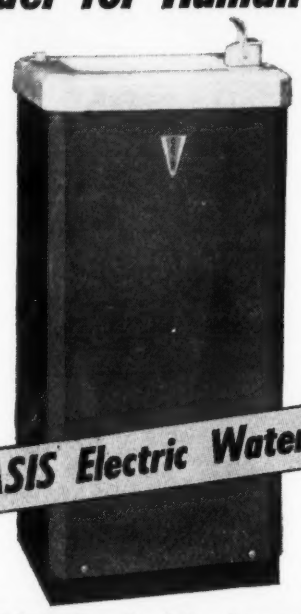
Kenosha • Milwaukee • DETROIT • Grand Rapids • Lansing

FOR BETTER THIRST RELIEF

ELECT

This Crusader for Human Efficiency

Descended from pioneers in the water cooler field



The People's Choice—with a record of years of faithful service

OASIS Electric Water Coolers

VOTE FOR

this winning candidate for the job of providing healthfully cooled, sanitary drinking water. It has made good in every office — in business and industry, as well as in public institutions of every kind. Win complete victory over thirst-fatigue with OASIS Electric Water Coolers.

The EBCO Manufacturing Company
401 W. Town St., Columbus 8, Ohio

Super-Markets Already Show Need of Walk-In Storage Units For Frozen Food

Murphy Cites Example Of Baltimore Store As Key To Future

J. J. Murphy, veteran Baltimore commercial refrigeration dealer, sees large frozen food storages for stores and other new markets looming up in the post-war era. He also says that "we have never paid refrigeration salesmen and service men enough . . . until the past two years."

BALTIMORE, Md.—Low temperature walk-in refrigerators for the storage of frozen foods will be purchased by super-markets across the country as soon as refrigeration equipment is available, in the opinion of J. J. Murphy, owner and operator of the Maryland Refrigeration Co., York dealer here.

From his recent experiences in the sale of equipment of this type, and from conversations with many of his customers who operate large retail food establishments in this area, Mr. Murphy believes that the refrigeration industry will profit greatly by the growing demand for frozen food storage facilities.

Mr. Murphy cites the Schreiber Bros. Market of Baltimore as a case in point. This organization operates one of the largest retail super-markets in America, doing a business in excess of three million dollars per year. Schreiber Bros. now own refrigeration equipment valued in excess of $50,000 and have storage rooms for meats, vegetables, butter, dairy products, eggs, and all other types of perishables. Further, the Schreiber Bros. Market is completely air conditioned.

With this equipment in use the organization recently asked Mr. Murphy to obtain for them several used low-temperature storage cabinets for the storage of frozen foods. Mr. Murphy explained to his customer that a few low-temperature cabinets would only serve as a stop-gap . . . at best, and that in their own interest they should consider the purchase of adequate storage facilities for quantities of frozen foods.

HOW THE STORE WAS EQUIPPED

As a result of this approach, Mr. Murphy's organization designed a low-temperature box measuring 22½ ft. by 12 ft. 9 in. by 11 ft. 9 in. high . . . all outside dimensions. This box was constructed complete with cold plates, York 5-hp. "Freon" compressor, Dole sectional freezer, doors, trackage, insulation, box construction, and all electrical and refrigeration work. The result is a "turn-key" job, ready to operate.

This new refrigerator enables Schreiber Bros. Market to store 65,000 lbs. of frozen foods (approximately three carloads) at 0° F. temperature, and will meet the market's normal demand for frozen food storage space for several years to come. Mr. Murphy believes that super-markets and other large food retailing establishments will require installations of this type in every city in the country.

Maryland Refrigeration Co. has also been active in the locker plant field, having installed several plants last year, including one at Towson, Md., having a capacity of 890 lockers. Mr. Murphy believes that the locker plant business on the eastern seaboard is only in its infancy and that many plants will be constructed during the next few years. He also plans to distribute frozen food cabinets through outlets now handling refrigerators, appliances, and other types of "plug-in" equipment.

"Our organization is well equipped to distribute low-temperature storage cabinets through retail outlets," Mr. Murphy asserts, "because we have excellent service facilities available and can take care of any customer's equipment."

ORGANIZING FOR SERVICE WORK

Maryland Refrigeration Co. now employs three experienced service men whose work is supplemented by apprentice mechanics during warm weather. These men are paid a straight salary for a 40-hour week and are guaranteed a full 12 months work per year. During the summer rush periods Maryland Refrigeration Co. pays time and one-half for all work over 40 hours, which enables all employes to earn a good living, Mr. Murphy says.

Mr. Murphy feels that wartime practices have put the refrigeration business on a sound basis for the first time in its history. He estimates that 50% of the independent refrigeration service men are now in the armed forces, thereby reducing the press of competition and making it possible to handle service on a profitable basis.

"Our service work in 1942 was five times the volume of 1940," Mr. Murphy declares, "and last year it was up 33% over 1942. We expect a continued increase this year."

The majority of service work han-

(Concluded on Page 7, Column 1)

Высших Исполнений

(IN RUSSIAN)

GKUZOLC

(IN ENGLISH)

both mean

PEAK PERFORMANCE

Sporlan CONTROLLED PERFORMANCE valves are the *only* thermostatic expansion valves with elements specifically charged to fit the application of the valve. These *selective charges* (G-K-U-Z-O-L-C) are designed to give the best operating characteristics for each type of installation. Only by using SPORLAN valves can you be assured of PEAK Performance on EVERY installation.

Sporlan manufactures Solenoid Valves . . . Magnetic Pilot Controls . . . Modulating Pilot Controls . . . Refrigerant Distributors and the only Thermostatic Expansion Valves with Selective Charges. If your post war plans include refrigeration or air-conditioning write SPORLAN immediately.

SPORLAN VALVES

SPOEHRER-LANGE CO.
3723 COMMONWEALTH AVE., ST. LOUIS 17, MO.

OPPORTUNITY
for an Outstanding
REFRIGERATION ENGINEER

LARGE MIDWEST FIRM noted for its outstanding developments requires services of a top-notch engineer and designer.

Should have sound theoretical background and considerable practical experience in the field of mechanical refrigeration. He must be able to undertake major phases of design and development of a new line of domestic refrigeration equipment.

Company management is strongly engineering-minded and provides a maximum of facilities and encouragement for this important work.

Write in detail as to your experience, education, family and draft status, and salary. Your letter will be passed on to our client immediately and will be treated in strict confidence.

(Employment subject to WMC rules.)

Henri, Hurst & McDonald, Inc.
520 North Michigan Avenue
CHICAGO 11, ILLINOIS

Sales and Repairmen Must Get Adequate Pay, Dealer Asserts

(Concluded from Page 6, Column 5)

dled by the Maryland Refrigeration Co. is confined to a radius of one mile in downtown Baltimore. Business organizations owning refrigeration equipment in this area are offered the facilities of the York Certified Maintenance Plan, whereby the customer is guaranteed all service which is paid for on a month-to-month basis.

"We have had customers who refused to pay for service until we presented this plan," Mr. Murphy relates. "Now, instead of constantly being in a jangle with the customer over a service bill, he pays say $47.00 per month for service, and is completely happy. Mr. Murphy reports that his organization has over 100 of these contracts in force at the present time, handling equipment from ½ to 60 hp. Smaller, fractional-horsepower machines are accepted on service contracts only in groups.

Mr. Murphy feels that in "easing up" on the present restrictions on the sale of commercial refrigeration, the War Production Board should put commercial refrigeration for food service in the number one position. He refers to the great need for both new and replacement systems in hotels, restaurants, and other places handling food.

Before the war the Maryland Refrigeration Co. was very active in the sale of Flake-Ice, or ribbon ice making machines. From his wide experience in this field Mr. Murphy feels that there will be an excellent future for a small Flake-Ice machine having a capacity of 500 lbs. per day. This machine would be used to advantage by small dairies, drug stores, hotel bars, confectioners, and other places having a steady demand for ribbon ice. Mr. Murphy does not feel that this machine will have a market in small restaurants and bars having a limited need for crushed ice . . . but will find a real market in many higher type establishments.

"Until the present war no service man . . . and no salesman . . . for that matter, ever made a decent living out of our business. The war has taught us that the customer will pay for service, and merchandise.

"There is no reason that this situation must change after the war, as our customers are becoming educated to paying for things, and permitting us to pay our salesmen and service men the way they should be paid. Our industry has a great future . . . and I believe it is on a sound business basis at last."

U.S. Court Upholds Carpenter Patent On Ice Skating Rink Construction

FT. WORTH, Tex.—Judge James C. Wilson in U. S. District Court here has upheld the claim of infringement of patent No. 1,917,634 covering the construction of a monlithic concrete floating floor and piping system for ice skating rinks, in a suit against the City of Ft. Worth and Texas Ice Events instituted by M. R. Carpenter of Cleveland, holder of the patent.

Judge Wilson in an oral decision held that the plaintiff's patent is valid and that it was infringed by the defendant. Said the judge:

"If plaintiff had an invention, it has to be in a slab of concrete, forming one block of a floating type, a monolith, so as to take care of the common trouble of buckles and cracks, in the surface of the concrete, from expansion and contraction. That he had done that, was the only chance, to my view, for him to have a valid patent.

"I found in the plaintiff's patent application a minute description of . . . the one objective I had visioned as essential. All else was incidental to an accomplishment of that one end.

"It only remained to be determined if he had attained that described objective in his claimed invention. To my view, he revealed it in his application, taken as a whole, in a very definite and skillful way."

The judge said that he knew of "no other business in which a concrete floor practically constitutes the key to success, and that the patent holder alone finally solved the problem."

"There are many things old in the art that the plaintiff appropriated, but he had a right to, if, in combination with the old, he added something new that made the result both new and useful and which was accepted, as proved here by public recognition.

"If he did do that, he is entitled to protection in the fruits of his years of labor in perfecting it. The evidence here conclusively shows that he did exactly that."

Sewell and Seligman To Act as Mfr. Agents

NEWARK, N. J. — Cleve Sewell and Monroe Seligman have formed the Sewell-Seligman Co. to function as manufacturers' representatives and engineering consultants for various lines of refrigeration equipment.

Both men were formerly with American Coils Co. They will maintain an office at 972 Broad St. in Newark.

C. L. Saunders Becomes Wheelco Vice President

CHICAGO. — Charles L. Saunders, former vice president of Minneapolis-Honeywell Regulator Co., has resigned as branch chief of the WPB Office of Civilian Requirements, to become vice president of Wheelco Instruments Co., Chicago. Mr. Saunders joined WPB in March, 1942, to organize an instrument branch to correlate manufacturing problems of the instrument industry with war production.

Explosion-Proof Battery Philco Development

PHILADELPHIA—Development of and explosion-proof storage battery, which the Navy Department designed and worked with the Philco Storage Battery Division to put into mass production for urgent war uses, has been announced by M. W. Heinritz, vice president in charge of the Storage Battery Division of Philco Corp.

It has been predicted that use of this new type of battery in electric industrial trucks will revolutionize current methods of material handling in government depots and manufacturing plants where any fire or explosion hazard exists.

"The design of the explosion-proof battery is such that, after the industrial truck in which it is used leaves the battery-charging station, all of the component parts are locked shut and cannot be opened until the truck is returned to the battery-charging station after completing its duty cycle," Mr. Heinritz explained.

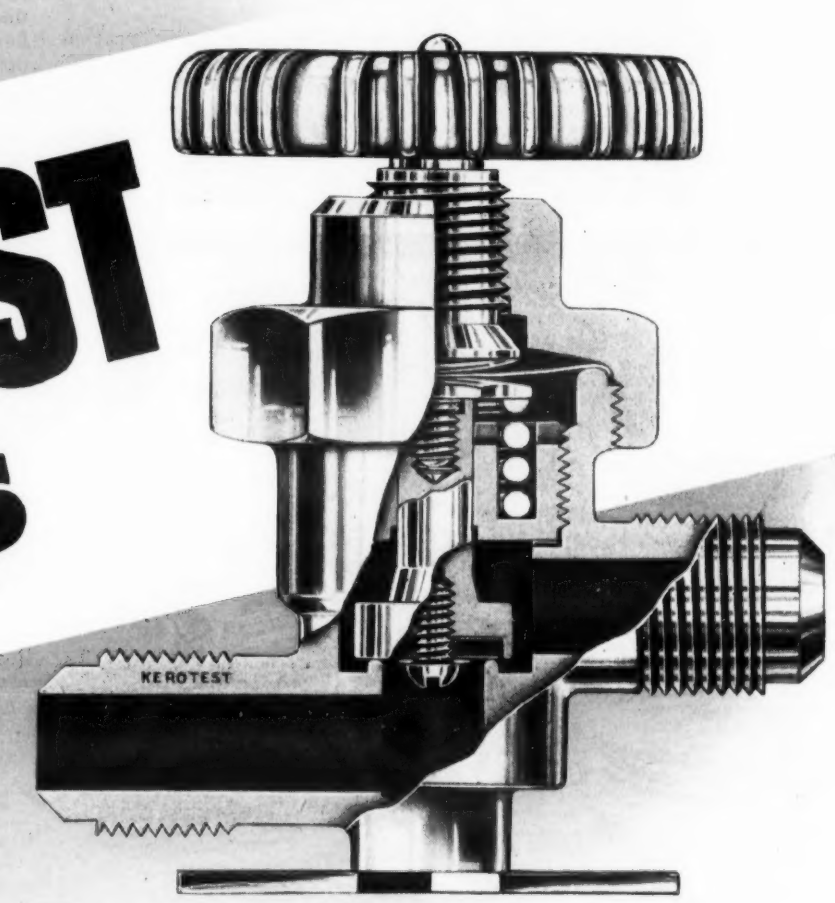
Gilmer BELTS

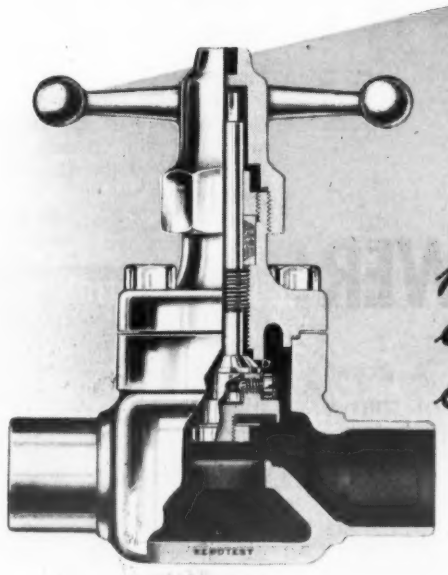
Dealers who stock Gilmer Belts, for replacement on air conditioning and refrigeration units, do a profitable service business.

Gilmer Belts are rugged, long-lived, and efficient, built to do the best job possible for the user. Get hold of your Gilmer jobber today . . . be ready for more business.

L. H. GILMER COMPANY
Tacony, Phila. 35, Pa.

KEROTEST VALVES





pioneers for over 2 decades in important developments for better control of

AIR CONDITIONING
REFRIGERATION EQUIPMENT

"It's been through the mill"—that's the accepted phrase for equipment that can take *tough service.*

Kerotest Valves have certainly *"been through the mill"* . . . accepted as the standard of quality and dependability in pre-war days, then serving—through Kerotest's doubled and tripled production capacity, without sacrifice in precision—the world's most critical customer, *Uncle Sam.*

With *Victory,* KEROTEST will again lead in providing important precision-built developments for better control of Air Conditioning and Refrigeration Equipment. Send us *your* specifications!

KEROTEST MANUFACTURING COMPANY
PITTSBURGH, PA.

Dependable KEROTEST *Valves*

25-Year-Old Distributorship Looks To Postwar Comfort Cooling & Frozen Food Equipment Boom

Edgar Morris Co. Officials Believe That Only Specialty Selling Can Put Air Conditioning Over

WASHINGTON, D. C. — Twenty-five years ago, when Edgar Morris returned to Washington after World War I, he organized the Edgar Morris Sales Co. From a modest beginning, with five employes, and only one merchandising line—Pittsburgh Gas Water Heaters—the company has grown to 50 employes and now distributes 11 nationally known lines of equipment, including the Westinghouse line of refrigeration and major appliances.

According to George F. Kindley, vice president of the company, World War II has not been a deterrent upon the company's business. Instead of sitting back and saying "It can't be done . . . let's forget it" . . . the Edgar Morris organization has forged ahead steadily during the critical days of World War II.

OPERATING IN WARTIME

Taking full advantage of the existing stocks of domestic refrigerators, the company still maintains a "full line" display of household boxes at its attractive downtown showroom on 13th St. As the picture shown on this page illustrates, entering the Edgar Morris Sales Co. display room today gives customers the idea of business as usual . . . even though the appliances shown are very scarce and can only be obtained on priority.

Mr. Kindley reports that domestic refrigerators are being sold today to military hospitals, civilian hospitals, drug stores (for preservation of biologicals only), and to many laboratories and other institutions dealing in perishable pharmaceuticals. Individual priority applications must be cleared on WPB form 867 for each individual refrigerator, but these are made out in such a way that the box may be purchased from any dealer. The company makes a practice of following all priority applications through the War Production Board offices and reports that few, if any, applications made have been refused during the past two years.

"We have enjoyed an excellent volume of household refrigerator business," Mr. Kindley said, "for the reason that we have concentrated our sales activities in places where we have been permitted by the government to supply essential military and civilian needs."

On the commercial refrigeration front the Edgar Morris Sales Co. has again concentrated on priority business . . . installing commercial equipment for government projects, for essential food services, and experimental laboratories. Mr. Kindley reports that the company's volume of business in water coolers and reach-in boxes has been especially favorable. Total volume of commercial refrigeration business has been "highly satisfactory" Mr. Kindley states.

While the Edgar Morris organization has never been active in the air conditioning business, this is the No. 1 Postwar Objective of the company, Mr. Kindley asserts.

"We sincerely believe that the residential market for packaged air conditioning and portable air conditioning (room coolers) will give us the greatest potential of all," Mr. Kindley says. "While we do not plan to overlook the possibilities of the home freezer, we are convinced that the residential market for packaged air conditioning will be responsible for our largest gain in business volume after the war."

MARKET FOR COMFORT COOLING

Mr. Kindley explains that Washington, D. C. home owners have long enjoyed a "good family income" and that this factor, coupled with a long, hot summer, will create a splendid market for air conditioning in the home. It is Mr. Kindley's considered opinion, however, that packaged air conditioning will have to be "sold" to the public by the same specialty methods used in putting over the household refrigerator and commercial refrigeration.

George F. Kindley, vice president and general sales manager of Edgar Morris Sales Co. of Washington, D. C., says his organization has pulled through the war by operating along usual lines and through priority sales. For the postwar, he sees a great market in his territory for air conditioning, but believes it can be promoted best by specialty selling methods.

"We must learn how to sell room coolers and packaged air conditioning equipment," Mr. Kindley says, "and must employ the same type of sales training and sales promotion that has made our industry successful. If air conditioning equipment is properly sold, and not oversold, it will find an ever increasing market in the homes of Washington people."

A member of the Westinghouse Planning Committee, consisting of a group of distributors that develop merchandising plans with the Westinghouse organization, Mr. Kindley has been with the Edgar Morris organization since its inception. For many years the company engaged in both wholesaling and retailing, but in 1938 retailing was discontinued, and all efforts were devoted exclusively to wholesaling.

Today the Edgar Morris Sales Co. serves over 400 retail customers, including department stores, utilities, electrical dealers, plumbing and electrical contractors, building contractors, and plumbing supply jobbers. Appliances installed in over 75,000 homes in the metropolitan area of Washington are largely serviced by the Morris organization. All service is handled from the company's warehouse located on Patterson St., Washington.

VIEWS ON FROZEN FOOD UNITS

Mr. Kindley believes that the market for home freezers, locker plants, holding rooms, and other frozen food services will expand rapidly after the war "if the frozen food people will cooperate." By this, Mr. Kindley means making frozen foods available at convenient locations and at attractive prices.

While there has been a great deal of talk about the "complete frozen meal," all prepared, cooked, and frozen ready for immediate use, Mr. Kindley believes that the trend in frozen foods will be in a somewhat different direction. He visualizes special frozen food "package deals" whereby the customer will purchase say 50 lbs. of assorted frozen foods at one time, to be taken home and stored in a home freezer . . . or deposited nearby in a locker plant until needed. Mr. Kindley feels that frozen foods will tend toward greater quantity purchases, both by the ultimate consumer and the purveyor of frozen foods.

Questioned about the possible effect of the home freezer on the locker plant industry, Mr. Kindley stated that he felt that one activity would help the other and that both would grow rapidly during the postwar years.

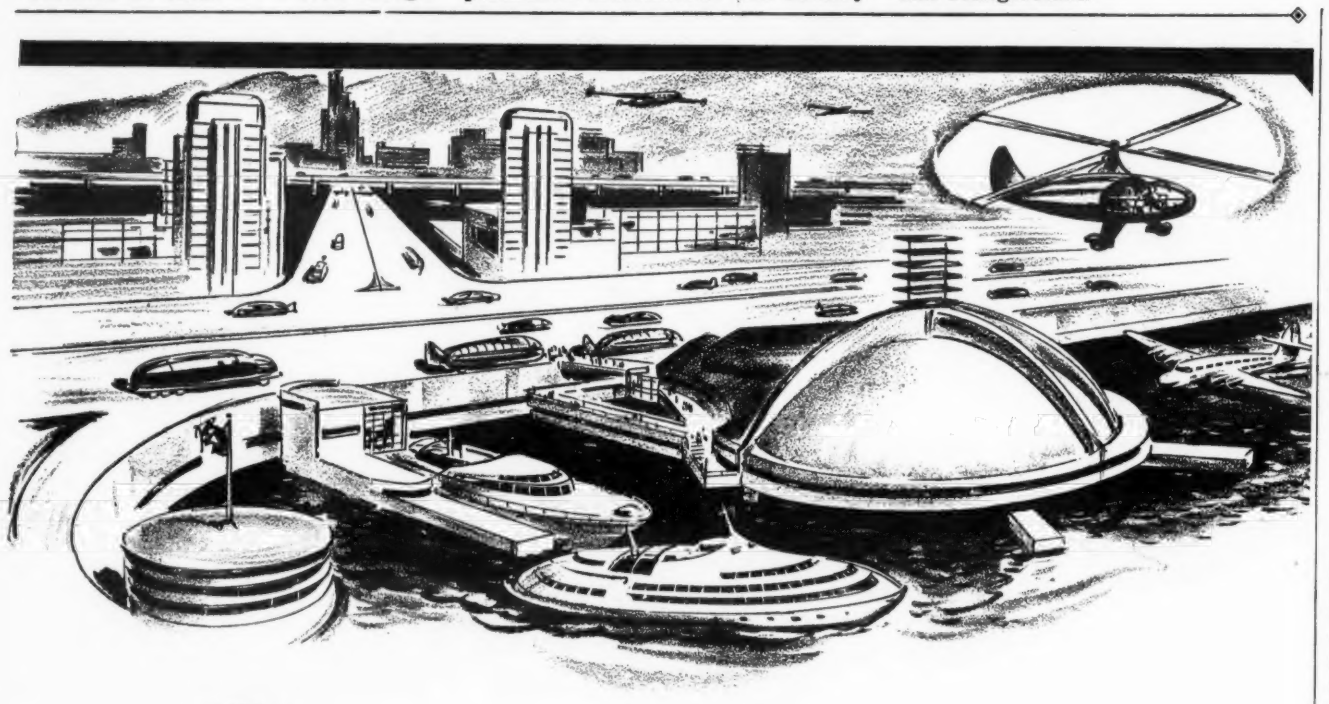
"We understand that most locker plants are interested in merchandising home freezers, and we have yet to find anyone willing to give up a locker. Thus it appears that the public will demand more and more frozen food storage space from both locker plants and home freezers."

The Edgar Morris Sales Co. is still headed, after 25 years of service to Washington, by Edgar Morris, president, and Mr. Kindley, vice president and general sales manager. L. L. Smith is secretary and credit manager, J. E. Law, service manager, and J. N. Shotten, Jr., commercial refrigerator manager.

Other members of the organization who have been associated with Edgar Morris for a great number of years include P. F. Ridgell (sales), 20 years; R. H. Kenney (sales), 15 years; George Warner (service), 25 years; George Butler (service), 25 years, and John S. Edmands (service), 15 years.

Besides the Westinghouse appliance line the Edgar Morris Sales Co. now handles Zenith radios, Stokol stokers, Humphery gas heaters, Cavalier, Magic Chef, and Wincroft gas ranges, Kolgas space heaters, Hamilton clothes dryers, Burnham electric steam radiators, and Pittsburgh water heaters.

The organization's present plans call for a steady and sound expansion of the organization in the field of air conditioning, particularly in residences, in the postwar period.



PLAN *Now* TO USE PORTABLE POWER!

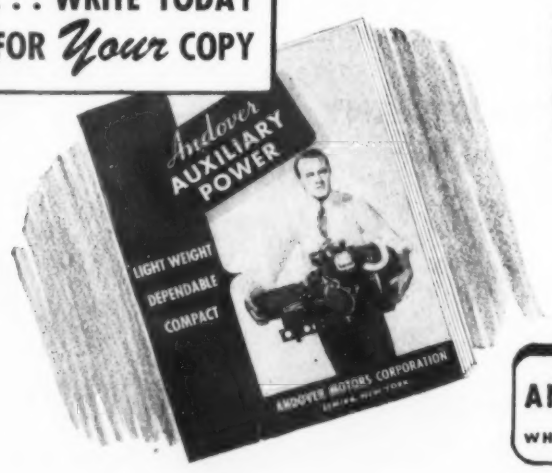
● America is making plans *now* for a great future—a future where the utilization of many vital wartime products will give us a more abundant life when peace is restored.

One of today's "weapons of war"—*the Andover Portable Power Unit*—will revolutionize the operation of much electrical and mechanical driven equipment in industry tomorrow where lightness and portability are desired.

It's not too soon to consider this compact unit for postwar duty in *your* industry. Its versatility of design—light weight, compactness, large power output per pound of weight and dependability—will mean much to you in the peacetime competitive period.

Send for the informative and descriptive booklet "Andover Auxiliary Power" today. It's chock-full of technical data and suggestive uses. No obligation.

. . . WRITE TODAY FOR *Your* COPY



Andover AUXILIARY POWER

ANDOVER MOTORS CORPORATION • ELMIRA, N. Y.

WHOLLY-OWNED SUBSIDIARY OF ANDOVER KENT AVIATION CORPORATION

REFRIGERATION ACCESSORIES

- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two-Temperature Valves.
- Accumulator Heat Exchangers.
- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
- X-Ray Refrigerating Units.

TEMPRITE PRODUCTS CORPORATION

47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

Refrigeration Engineer

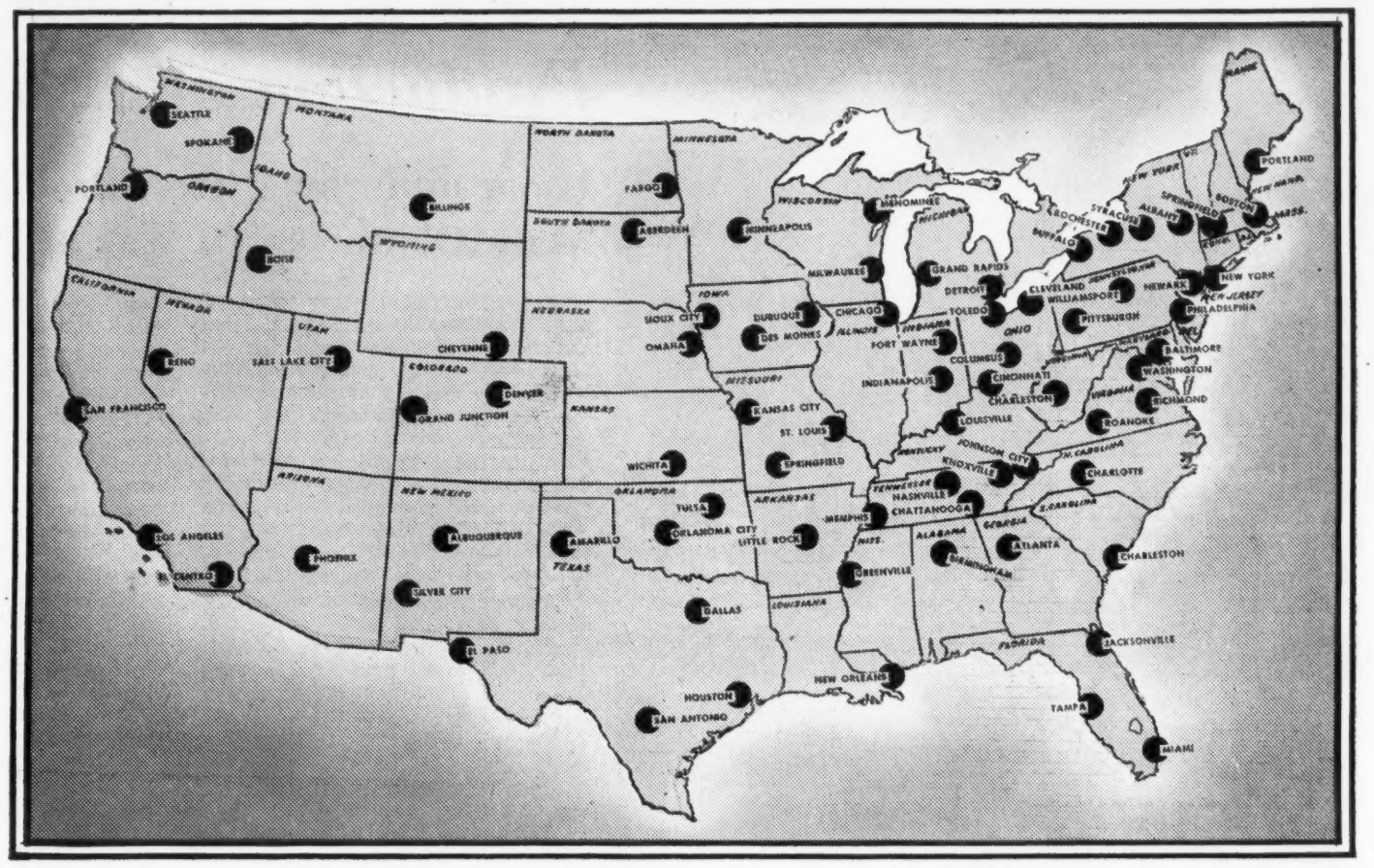
There's an important opening right now for a progressive young engineer in the Ben Hur Refrigeration Department. His work will lead to a key position in this firm's design and application engineering work on the postwar Ben Hur farm freezer line. The position will be permanent, interesting, and full of possibilities to grow with this alert organization. If you're interested in lining up with an adequately financed, successful firm backed by more than a quarter century's steady progress, write me fully today outlining your experience and salary requirements.

A. B. BECHAUD

BEN HUR MANUFACTURING CO.

634 E. Keefe Ave., Milwaukee, 12, Wisc.

HERE'S HOW NORGE DEALERS BENEFIT FROM THIS NATIONAL NETWORK OF INDEPENDENT DISTRIBUTORS...



Your Norge distributor is an independent business man who knows every detail of every model of every line of Norge household appliances. And, like you, he backs his judgment with his own money. This assures his continuous personal interest in your problems, which he will often solve for you by his authority to make final decisions on the spot, cutting red tape and saving you days, even weeks.

Since 1941 there has been a 37% increase in the number of Norge distributors. No matter where you do business today, an aggressive, progressive Norge distributor (carefully selected for his ability to keep you in a sound competitive position) is your neighbor.

The sincere, helpful, profit-producing service rendered to dealers by sound, seasoned Norge distributors is another reason why today so many men in the know are saying, You have a great future with Norge.

NORGE DIVISION, BORG-WARNER CORPORATION, DETROIT 26, MICHIGAN

BETTER PRODUCTS FOR A BETTER WORLD

SEE

NORGE

BEFORE YOU BUY

"...for outstanding production of war material."

Who knows the formula for SULFUR DIOXIDE and for METHYL CHLORIDE?
QUIZ 'EM
That's easy...
ANSUL*
LIQUID Sulfur Dioxide by ANSUL
LIQUID Methyl Chloride by ANSUL
*REG. U.S. PAT. OFF.
Available in carload lots or handy cylinders sized for servicemen's needs.
ORDERS FILLED PROMPTLY through your Ansul Jobber.
ANSUL CHEMICAL COMPANY
MARINETTE, WISCONSIN
Agents for Kinetic's "FREON-12" and "FREON-22"
AC-5-44A

'WPB Is Considering the 'Replacement' Production of 12,000 Display Cases

Labor and Sheet Steel Problems Are Main Obstacles In Way of Program

WASHINGTON, D. C.—The possibilities for the near-future production of refrigerated display cases are outlined in the report, just made public, of the July meeting of the Commercial Refrigerator Industry Advisory Committee.

A program "might be requested and established for 12,000 units," declared a WPB official at the meeting.

Following is the report on the "program for display cases" part of the Advisory Committee meeting:

"Although the need for producing display cases has been recognized, a program request has been deferred until the over-all policy on resumption of now prohibited production was clarified, Fred W. Smith of WPB, told the committee.

NO MOTORS REQUIRED

"Recognition must be given to the effect of the labor situation on any proposed program, particularly in No. 1 and 2 labor areas, and to the need for critical components. The position of display-case equipment is fortunate because no motors are required, and the material problem is not overwhelming. If distribution should be limited to replacement of like equipment and not permitted for expansion or in cases where a new condensing unit is required, how much the requested program should be is a problem, Mr. Smith said.

"The 3,668 reports received so far, which check fairly well with the task committee reports that were submitted in the fall of 1943, indicate that from 60,000 to 70,000 display cases were produced in 1940. Several committee members said that this estimate is very close to industry's previous estimate, which covered production of non-association as well as association members.

"In 1940, Mr. Smith pointed out, three types of sales were involved:

"1. New equipment for newly established businesses.

"2. New equipment for modernization of existing businesses, with trade-in of old, although not worn-out equipment.

"3 Replacement of entirely worn-out equipment.

HOW REPLACEMENT IS FIGURED

"Normal replacement of 20% of 1940 production would be about 12,000 cases, Mr. Smith said. The supplementary report of the task committee has shown that 56,700 cases should be scheduled in 1944 for replacement purposes. This figure, however, included 15,000 frozen food cabinets and 3,000 dough retarders. An entire year's production could not be justified only for replacement.

"Subject to two limitations, Mr. Smith said, a program might be requested and established for 12,000 units:

"1. WMC clearance of labor—Any manufacturers in a No. 3 or 4 area might proceed without WMC approval; manufacturers in the more critical areas would have to obtain clearance from the local WMC board or the production urgency committee before WPB could consider authorizing materials. In industries that are operating on a quota basis, WPB has been able to increase the quotas of manufacturers in labor areas 3 and 4 automatically, but has been subject to WMC clearance for manufacturers in the upper two labor area classifications.

QUOTA SYSTEM IS BETTER

"WMC has been reasonable where the urgency of the product has been established and where available labor has not been required for war work.

"The differentiation between operating under an established program, with assignment of quotas of base-period production, and operating under the fourth WPB regulation for return to civilian production, Mr. Smith explained, is that, under the former, only those manufacturers in the upper two labor area classifications, would have to obtain special WMC clearance, while under the latter, manufacturers in all four classifications would have to obtain special labor clearance.

"2. Material—The estimated requirement for carbon steel for producing 12,000 units is about 2,025 tons. Since sheet steel is still tight and requirements for its military use are increasing, at least 50% of the required material would have to be available from inventory or would have to be obtained under Priorities Regulation 13; in authorizing a program, therefore, the WPB Requirements Committee would probably cut the allocation of steel for producing display cases to about 1,013 tons.

SITUATION ON STEEL

"No idle steel of the kind required is available, a committee member reported. Steel mills, on the other hand, have offered December and January space, which they have said is over and above that required for military orders.

"Another possibility, Mr. Smith said, is that whatever amount of steel is authorized may be subject to a Z-1 instead of a J-6 allotment symbol. The disadvantage under a Z allotment symbol, however, is that delivery must be contantly pushed back until regular CMP orders have been filled; promised deliveries on J-6 orders stand once the orders have been accepted by the mill. Under an established program, at least half of the required material would be authorized under a firm symbol. An assured delivery would permit planning for resumption at a later date, with time for obtaining idle inventory or placing additional orders on a firm allotment.

"Recommendation—The details of obtaining material should be subordinated to establishment of a program, the committee unanimously recommended; it asked that whatever is possible be done to get a program established.

"Conditions under which Purchases of New Equipment are Allowed—Purchases of new equipment are permitted for inplant feeding, for expansion of services in over-crowded areas, and for conversion from service to self-service stores, Mr. Smith told the committee.

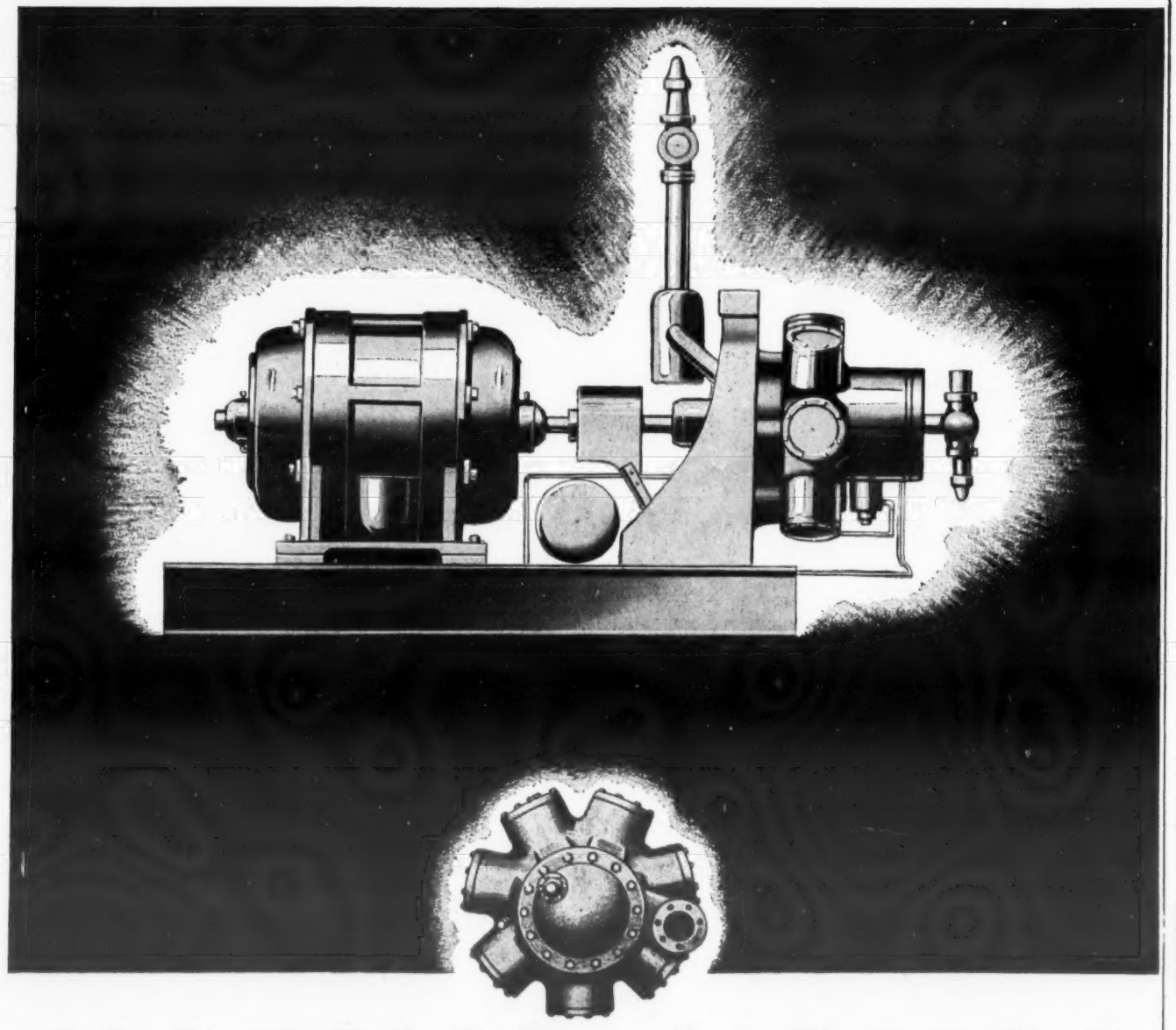
"Advisability of Closer Contact with WPB field Offices—A Government official pointed out the advisability of industry's dealing to a greater extent with local WPB regional offices so as to avoid direct communication with or travel to the Washington office. Regional WPB representatives have been adequately instructed as to processing applications and as to the circumstances under which applications may be granted or must be denied. For each regional office, a list of men who are to supervise established programs has been sent to each manufacturer.

"Probable Date when Program will be Considered—A proposed program for display cases is to be considered after the proposed amendment to L-38 is cleared with military claimant agencies, Mr. Smith said."

Bimel Co. to Add Line Of Household Appliances

CINCINNATI — Major appliances will be handled by the Bimel Co., veteran outlet for air conditioning, commercial refrigeration, and stokers, as soon as they are available, announces Carl Bimel, who says the firm now has franchises for refrigerators, washers, ranges, radios, and kitchen cabinets.

E. Guy Flaig, formerly with Crosley Corp., will direct appliance sales.


CHRYSLER AIRTEMP
VARIABLE CAPACITY RADIAL COMPRESSOR
Direct Connected...No Vibration
Smooth performance, at standard motor speeds, is made possible by the famous Chrysler Airtemp Radial Compressor design. Dynamically balanced, these compressors are directly connected to the electric motor. There are no belts or pulleys to cause slippage, and maintenance costs are greatly reduced.
The compact, functional design; the exclusive Variable Capacity feature which automatically and instantly absorbs fluctuating loads; the light weight and unloaded starting . . . all give Chrysler Airtemp Heavy Duty Units a distinction that is winning high respect in industry and at the battlefronts.
Put your temperature-humidity control problems up to Chrysler Airtemp for quick, satisfactory solution.
BUY WAR BONDS
CHRYSLER AIRTEMP
AIRTEMP DIVISION OF CHRYSLER CORPORATION • DAYTON, OHIO
Tune in Major Bowes every Thursday, CBS., 9 p.m., E. W. T.

PURO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.
PURO FILTER CORP. OF AMERICA
DRINKING WATER SPECIALISTS FOR 40 YEARS.

Electrimatic
AUTOMATIC CONTROL VALVES AND REGULATORS
2100 INDIANA AVENUE • CHICAGO 16, ILL.

Supermarkets Eye Self-Service In Packaged Frozen Food Lines

Some May Also Install Own Freezers

NEW YORK CITY — Continued "super-success" of the past decade's innovation in food retailing—namely, the supermarket—has led the operators of these colossal corner groceries to plan for even greater expansion, which will include enlarged frozen food departments, according to officials of the Super Market Institute.

Highly popular with both the public and supermarket operators are the self-service departments, and this should prove a boon to frozen foods, which are sold only in the packaged form. The problem of proper display is likewise not difficult today. A number of supermarkets have installed or plan to install their own quick-freezers, too, it is said.

MORE FROZEN FOODS FOR KROGER

One of the big chains, Kroger Grocery & Baking Co., has definitely indicated that it will greatly expand its frozen foods departments.

In general, expansion of supermarkets is expected to follow these three paths: (1) addition of lines of merchandise outside of food; (2) self-service in former clerk-service departments; (3) community service as a builder of goodwill.

Some stores contemplate adding such items as proprietary medicines, doughnut machines, wines, liquor, hardware, electrical goods, etc. Other stores have already been successful in expanding the self-service feature even to fresh vegetables and meats, although some operators noted that shop-lifting of butter has reached new highs under rationing. It's not the money, but the points, they say. Future plans call for larger packages in several self-service lines, chiefly to prevent concealment by light-fingered customers.

STRESS COMMUNITY SERVICE

The community service angle has been carried out by one supermarket to the point where it built a community hall on the second floor. Here banquets are supplied with all the food by the supermarket's own catering department.

At the present time there are nearly 10,000 supermarkets in the country, according to the Super Market Institute, while in 1941 there were 8,000, and in 1939, only 4,900. Number of typical grocery stores has dropped 50,000 since 1941, estimate Institute officials, as a result of the war and the growth of supermarkets.

The big food chains, for example, have followed independents in setting up supermarkets, drastically reducing the number of typical small stores they formerly operated. The chains are not only meeting the competition of lower prices through carload buying and cuts in overhead, but are also lowering their state taxes, which are often based on the number of units operated.

Coast Jobbers Against Mfr. Warehouse Stocks

SAN FRANCISCO — A stand against manufacturers maintaining warehouse stocks was taken by members of the Pacific Coast Jobbers Association at their last meeting here.

The feeling among this group of refrigeration parts and supply jobbers is that if the jobber intends to do the right kind of a job, it should be up to him to carry the necessary stock of supplies to take care of his trade.

Firms represented at the meeting included: Associated Refrigeration, Sacramento; Arbell Refrigeration Supplies, Fresno; Refrigeration Supplies Distributor, Los Angeles; Refrigeration Service, Inc., Los Angeles; Refrigerative Supply, Inc., Seattle, Wash.; Jacobs & Gile, Inc., Portland; Wyatt R. Brown Co., California Refrigerator Co., Pacific Metals Co., Hinshaw Supply Co., and Refrigerating & Power Specialty Co., all of San Francisco.

Key Men Among Pacific Coast Supply Jobbers

When members of the Pacific Coast Jobbers Association assembled for a meeting, Lawrence Roth of Los Angeles, one of the group and an expert cameraman, took this picture of one of the most representative gatherings of supply jobbers ever to meet on the West Coast. Seated, left to right: Jess E. Rauch, Byron Waters, N. W. Edwards, M. F. Stutzman. Standing, left to right: C. E. Baker, G. C. Armour, Peter H. Askew, Fred F. Culp, Harold G. Stern, Jack M. Tupper, Wyatt R. Brown, and R. L. Hinshaw.

Hawaiian Firm Takes Cordley & Hayes Line

HONOLULU, T. H. — Electrical Distributors, Ltd. here has been appointed distributor in the Hawaiian islands for the Cordley & Hayes line of electric water coolers.

Marine models of Cordley & Hayes water coolers are used extensively in the U. S. Navy on cruisers, destroyers, battleships, aircraft carriers, landing craft, etc., reports the factory headquarters in New York City. Units have also been ordered for the new 45,000-ton aircraft carriers now under construction.

Special marine models which won't overload or overheat have also been developed for installation in ships' engine rooms and machinery compartment spaces where room temperatures frequently reach 122° F., the company said.

NEW 1944 CATALOG

Write for copy on your letterhead

Washing Machine Parts Catalog will not be issued in 1944

SERVICE PARTS CO.
2511 Lake St. Melrose Park, Ill.

wanted

MEN WITH THE DESIRE AND ABILITY TO MAKE A FORTUNE

--FROM THE VAST, PENT-UP BUYING POWER OF THE FOOD INDUSTRY

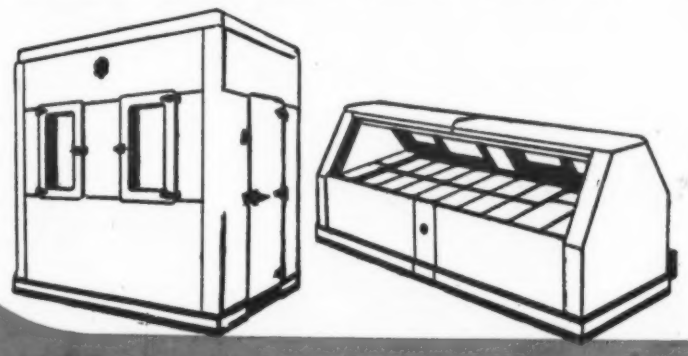
FRIEDRICH FLOATING AIR REFRIGERATORS

FRIEDRICH Floating Air WITH COOLITE COMMERCIAL REFRIGERATORS AND FREEZING UNITS

FRIEDRICH -- one of the oldest and most successful commercial refrigerator manufacturers--has a few choice territories open in several states including New York, Massachusetts, Michigan, Minnesota, Ohio, Kansas, Maine, Colorado, Washington (and many foreign countries), for men qualified to present . . . . . .

Plan Now

for a better future. Friedrich patented air and light conditioning and other exclusive refrigerator features give our representatives substantial advantages. Friedrich, for 61 years under the same management, has refrigerators installed in all 48 states and nearly every city in the land—tens of thousands of enthusiastic Friedrich boosters to help you sell. Heavy, brand-sustaining advertising program now accumulating prospects. Powerful advertising and merchandising support when production is resumed. Make YOUR connection NOW while the most promising territories are available. Write or wire for a sales proposition that offers a permanent, profitable future.



ED FRIEDRICH SALES CORP.
SAN ANTONIO, TEXAS
Dept. ACR 1

INDIA NOW and POST-WAR

To those manufacturers contemplating extending their export market to rapidly expanding British India, excellent opportunities are offered through the medium of The Industrial & Commercial Trust Limited—an experienced well-established Company, financially sound with extensive ramifications throughout the country—to further that end.

This Company is prepared to consider the sole agency for India for machine tools, cutting tools, plywood and plastics of all kinds. Domestic radio, apparatus and accessories, automobiles and parts, and kindred lines.

Bank and other references submitted.

Communicate direct to:

THE INDUSTRIAL & COMMERCIAL TRUST LIMITED
WAVELL HOUSE, 15 GRAHAM ROAD, BALLARD ESTATE, FORT, BOMBAY

WHEN PEACE COMES

·KOCH·

WILL AGAIN PRODUCE COMMERCIAL REFRIGERATOR EQUIPMENT FOR CIVILIAN USE

NOW SOME SELF-CONTAINED REACH-IN REFRIGERATORS ARE AVAILABLE FOR THOSE WHO CAN QUALIFY . . . . . .

Write — Wire — Phone

K OCH REFRIGERATORS
NORTH KANSAS CITY . . . MO.

Huarisa Heads All Admiral Engineering

J. B. HUARISA

* * *

CHICAGO—Recent changes in the executive setup of Admiral Corp. have made J. B. Huarisa executive vice president in charge of production and engineering for all divisions of the company.

Irwin Mendels, formerly president of Radio Products Corp., Chicago, which was absorbed by Admiral, was elected chairman of the executive committee.

Richard G. Graver, formerly midwest regional manager, becomes vice president in charge of the radio division.

Vast Majority of Appliances In Use Are Now More Than 5 Years Old

WASHINGTON, D. C.—The survey made of 4,500 households during April by the Office of Civilian Requirements, as reported in the July 31 issue of AIR CONDITIONING & REFRIGERATION NEWS, brought out the facts that a relatively high percentage of major appliances are now out of order, and that more than half of the country's appliances are more than five years old.

While in many instances an adequate supply of repair parts and availability of trained repairmen could no doubt readily put back into operation those units now out of repair, the overall age points to a vast replacement market after the war. New models of latest design and improved efficiency will quite probably replace the vast number of overage appliances, it is thought.

Highlights of the consumer survey are contained in the following table:

* * *

What Gov't Survey Showed About Appliances

	Estimated Number in Households	5 or More Years	Out of Order %
Electric toaster	22,151,756	57.8%	7
Electric iron	32,939,352	62.2%	6
Electric fan	13,929,452	62.5%	7
Radio (excluding auto)	46,275,528	52.0%	15
Vacuum cleaner	16,770,492	73.2%	7
Sewing machine	23,664,192	89.1%	5
Mechanical refrigerator	21,132,324	63.4%	2
Washing machine	18,625,424	72.1%	5
Cooking stove—gas	20,305,080	67.7%	1
Cooking stove—electric	3,542,944	59.3%	3
Cooking stove—oil	6,216,864	58.8%	6
Cooking stove—wood	11,715,112	74.6%	4
Heating stove—gas	8,648,460	49.2%	1
Heating stove—electric	11,186,552	59.5%	3
Heating stove—oil	3,618,148	49.1%	2
Heating stove—wood	13,102,208	57.5%	4

Illustration is from Inland poster showing operation in the production of the Inland-made carbine.

The battle-worthiness of the Inland-made Carbine has been proved by gallant American foot soldiers in landing operations all over the world. Light and maneuverable, this vicious little .30 calibre gun easily and quickly fires 15 high-velocity slugs from one clip with deadly accuracy.

Called an outstanding development of the war, the Carbine is a prime example of Inland's versatility in engineering and manufacturing. Its production achievement—starting from scratch—has gained Inland wide recognition for many important contributions to the technique of mass production of firearms.

The Carbine is one of many Inland products for Victory which are helping to give fighting fire-power to invading Americans on the beaches of France, Italy and the South Pacific.

INLAND MANUFACTURING DIVISION, General Motors Corporation, Dayton, Ohio

INLAND *Manufacturing* **RUBBER, METAL, PLASTICS**

Inland Products for Victory include Carbines, Tank Tracks, Gun Sights, Helmet Liners, Extinguisher Horns, and Rubber, Synthetic Rubber and Metal Parts for Tanks, Aircraft, Submarine Chasers, Torpedo Boats, Artillery Lighters and Landing Craft.

American Bankers Association Announces Broad Credit Policy For Small Business

NEW YORK CITY—Every "competent" man, firm, and corporation that needs bank credit for some constructive purpose will get it, according to a credit policy plan adopted by the Postwar Small Business Credit Commission of the American Bankers Association, it was revealed Aug. 4 by Robert M. Hanes, chairman of the commission and former president of the American Bankers Association.

"Every competent individual, firm, or corporation in the United States that needs bank credit will get it if the money is to be used for some constructive purpose that will serve the private enterprise economy of this country," declared Mr. Hanes. "If the individual banks cannot grant the credit, we as bankers pledge ourselves to stay with him and see that he gets the money from some other bank or group of banks. American banking will see that small business lives and is given the opportunity to grow and prosper.

"It should be clearly understood, however," continued Mr. Hanes, "that this does not mean that banking is embarking upon a program of making reckless loans. Such loans are of no benefit to the borrower, the bank, or the community. Nor is it to be construed that banks have not been making loans to small business men of character and ability. They have been doing it for years. In 1940, the last full year of peacetime business operation, the banks of the country made more than 24 million loans, the average new loan being approximately $1,700.

"The members of the Postwar Small Business Credit Commission," said Mr. Hanes, "are determined to see that this great credit reservoir is used for productive purposes to facilitate the conversion of business and industry from war to peacetime production, to revitalize the many segments of small business adversely affected by wartime restrictions, and to provide the financial encouragement and strength to business, industry, agriculture, and the professions that will create maximum postwar employment, particularly for returning war veterans.

"In doing this," he added, "the entire machinery of the American banking system will be utilized to the fullest extent. Where a local bank cannot extend either part or all of the credit needed, it will be encouraged to make use of its long-standing reciprocal relationships with other banks to see that the money is made available or an earnest attempt is made to make the application suitable for bank consideration. Small business will be the chief beneficiary."

The term loan principle will be adapted to the needs of small business, according to Commission's plans. This effective lending mechanism whereby loans are made for a term of a year or more under agreed conditions was developed extensively by banking during the past 10 years. At the close of 1940, some 3,000 commercial banks held an estimated two billion one hundred sixty-two million dollars in term loans.

Detroit Contractors Outing Is Aug. 19

DETROIT—Annual outing of the Refrigeration Contractors Association of Detroit will be held Saturday, Aug. 19 at the Beverly Gardens located at Van Dyke and 13 Mile Rd. here.

Scheduled to run from 9 a.m. to 11 p.m., the picnic is open to all licensed refrigeration contractors and their employes. Sporting events, games for children, golfing, and dancing in the evening are planned. Cost of admission, which covers prizes, noon dinner and evening lunch, beer, etc., is $1.50 per family.

Leach Is Sales Manager For Krich-Radisco

NEWARK, N. J.—Andrew K. Leach has been appointed general sales manager of Krich-Radisco, Inc., exclusive distributor in New Jersey for Kelvinator, Bendix, Ironrite, RCA, Victor records, New Home, and Eureka.

Mr. Leach has been with Krich-Radisco for 15 years. From 1929 to 1935 he headed RCA Victor sales in Pennsylvania. Moving to the Newark, N. J. office in 1935, he served in various sales capacities. For the past three years, he has managed sales of the firm's Bendix division.

EXCLUSIVE—

Yes, we're exclusive. We teach ONLY Refrigeration and Air Conditioning. The men on our instruction staff are EXPERTS in this one particular field. Our entire shop facilities are devoted ENTIRELY to Refrigeration and Air Conditioning. This up-to-the-minute course can help make you the BEST service man in your community. Resident or Home Study combined with actual shop training at low cost. Write today for complete details.

COMMERCIAL TRADES INSTITUTE

School of Refrigeration and Air Conditioning

Chicago, Ill. 221 N. LaSalle St. — Birmingham, Ala. 200 S. 20th St. — Bloomington, Ill. 300 E. Grove St.

Load Calculation Is Different in Rapid 'Pulldown' Systems

PITTSBURGH—A new method for computing the heat loads that must be carried by refrigeration equipment during temperature reduction in quick pulldown installations has been developed by H. B. Pownall and S. P. Solin of the Mechanical Engineering Department of York Corp.

In a paper presented at the mid-year meeting of the American Society of Refrigerating Engineers, the York engineers described the new method as one by which installations calling for rapid temperature changes in enclosed spaces may be rationally designed. This was substantiated, they pointed out, by the very close agreement between their calculated values and actual performance tests. The method for determining the heat load analytically is based on the graphical method generally attributed to Schmidt, and is therefore easier to apply.

The increased need of the aircraft industry during recent years for certain facilities prompted the study. These requirements not only call for rapid temperature changes in enclosed spaces, but for variations in temperature which must take place in periods varying from a few minutes to several hours. Such extreme conditions are brought about by the ability of planes to make rapid climbs or dives from sea level to altitudes as high as 50,000 feet, and result in a temperature range falling between the limits of plus 150° F. to approach -125° F.

Summarizing their findings with the new method, the York engineers report that: 1) the heat flow rate is dependent primarily upon the temperature difference between the air and the various surfaces exposed to the air, and only secondarily upon the heat capacity of the objects comprising these exposed surfaces 2) a balanced condition must always exist between the refrigeration compressor capacity and the rate of heat flow from the exposed surfaces; and 3) beyond a certain point in any given system the time rate of change of air temperature slows up.

Nylon Spinning Speeded By Air Conditioning

HAZLETON, Pa.—An air conditioning system has been installed in the plant of Freeland Mills, Inc. here to control temperature and humidity. The spinning of nylon, rayon, and silk is speeded up where these two factors are constant and the air conditioning will help speed up production at the plant which is working exclusively on government orders.

In connection with the installation, the plant has been remodeled. Plate glass windows have been removed and this area has been filled in partly with brick and partly with glass blocks.

Filtrine HIGH EFFICIENCY

WATER COOLERS
for
DRINKING WATER AND INDUSTRIAL APPLICATIONS

ADVANTAGES:

- Large water storage available to meet peak loads or emergency requirements—in excess of condensing unit hourly capacity.
- Direct contact cooling. Extra heavy steel submerged evaporator—quick heat transfer.
- Long-cycle machine operation—reducing service calls and prolonging machine life.
- Dependability. Filtrine Water Coolers do not court trouble. There is nothing to get out of order—no "hair-splitting" control adjustments.
- Flexibility of application to individual, duplex and multiple installations.
- Engineered to comply with highest commercial standards.

Quick Shipment.
Write for details.

FILTRINE MANUFACTURING CO.
53 Lexington Ave., Brooklyn 5, N. Y.

Refrigerated Cornea 'Bank' Set Up To Aid Cases of Failing Eyesight

Frozen Tissue Has Healing Effect, Says Russian

NEW YORK CITY—Preserved by refrigeration, corneas from donated human eyes will be stored in an "eye bank" to be established at the New York Hospital here for transplanting into the eyes of persons suffering poor eyesight because of afflicted corneas.

The New York Hospital will distribute corneas (the bony, transparent shell enclosing the eye) collected from 19 other hospitals. Since refrigerated corneas must be used while they are still fresh, arrangements have been made with the National Red Cross Motor Corps for rush transportation.

There are at least 100,000 people in this country whose foggy eyesight could be improved by transplanting a healthy cornea, medical authorities say. It is not necessary to match corneas as blood is matched for transfusions, it is said.

Up to the present time the most extensive work with transplanting of corneas has been performed in Russia, it is said, by Prof. Vladimir Filatoff, whose operation is limited almost entirely to cases of leukoma (wall eye), an opacity of the cornea which follows when the eye is injured by a blow, spattered with hot metals or liquids, or is diseased because of tuberculosis, gonorrhea, trachoma, or syphillis. The operation requires only a few minutes.

Prof. Filatoff also claims that when bits of skin, mucous membrane, placenta, liver, and vascular coating of the eye, as well as corneas, are kept at almost freezing temperature "substances are developed which, upon being introduced into a diseased organism," have a remarkable healing effect.

Dean Is Vice President Of Elliott-Lewis Co.

PHILADELPHIA—Bruce A. Dean has been appointed vice president of Elliott-Lewis Electrical Co., Inc., appliance distributor here, announces Frank R. Elliott, Jr., president of the firm.

For the past two and a half years Mr. Dean has been stationed at Washington, D. C., as special assistant to General Electric Co.'s vice president in charge of purchasing.

Many Dealer 'Casualties' Are Planning Comeback

SPOKANE, Wash.—More than half of the electrical appliance dealers and contractors in the Pacific Northwest have closed their doors since 1941, but nearly all are planning to reenter the electrical field after the war, according to the findings of a survey by the Northwest Electric Light and Power Association.

Bastian-Blessing Delays Naming Contest Winners

CHICAGO—President L. G. Blessing of the Bastian-Blessing Co. has announced that so many entries have been received in the company's $2,500 "Fountain Idea" contest that the awarding of prizes has had to be postponed from July 31 to Aug. 15 to give the judges sufficient time to evaluate the suggestions and decide upon their relative merits.

Twenty prizes in war bonds were offered by the Bastian-Blessing Co. in this contest, with a total maturity value of $2,500, for suggestions for improving postwar soda fountains and fountain service.

Neuer Plans L.A. Firm

LOS ANGELES — Universal Refrigeration Co. is the firm name under which Adolph Roman Neuer has published a certificate that he is conducting business at 1859 South Western Ave., Los Angeles, Calif.

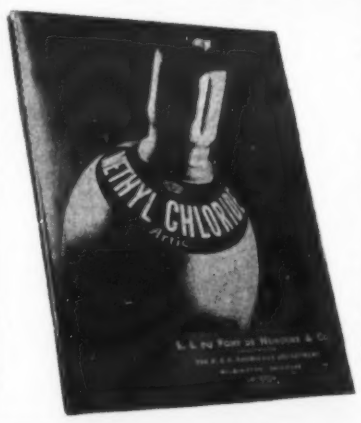
SPECIFY 99.5% PURE

DU PONT METHYL CHLORIDE

NOW AVAILABLE FOR REFRIGERATION WORK

THIS HIGH-PURITY PRODUCT meets the exacting requirements for a *dependable* methyl chloride to be used as an original charge, recharging or replacement for unavailable or scarce refrigerants. Current supply is sufficient to fill approved requirements. Order only what you need, but don't stock up, for you can get Du Pont Methyl Chloride when you need it...quickly ...from stocks in principal cities.

Don't forget to empty cylinders promptly...return them quickly. That's how you can help to keep Methyl Chloride moving to you and others.



Get this book! Send for your copy of Du Pont's 92-page Manual on Methyl Chloride. It's packed with helpful, practical data for every refrigeration engineer and service man. Just write: E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.

DU PONT METHYL CHLORIDE—SPECIFICATIONS

Purity	99.5% Methyl Chloride
Moisture	0.008% by wgt. max.
Acid (as HCl)	0.001% by wgt. max.
Residue on Evaporation	0.01% by wgt. max.
Boiling Range (760mm)	—24.6° to —23.6°C.
Color	water white, clear

BUY WAR BONDS EVERY WEEK!

DU PONT ELECTROCHEMICALS

DU PONT

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

Right Way To Sell Home Freezers Is To Sell Food For Them Also, Says Pioneer Salesman

Many polls of public wants show that if they were available, home freezers would right now be near the top of public purchases of big appliances. But will the public fight to take them away from dealers after the war, after rationing?

One phase of this problem was covered in the Hotpoint survey of locker plant operators and their attitudes towards home freezers, published in the July 3 issue. This article reflects the experiences and plans of a man who sold home freezers before the war. Other articles on the subject will follow.

By Phil B. Redeker

ST. PAUL—Some sales expert once said that the essence of specialty selling was to "sell the sizzle, not the steak" but in the case of the home freezer cabinet it may well be that the answer to the sales problem will be to "sell the steak, as well as the cabinet in which it will be stored."

At least that's the thinking of the man who pioneered the introduction of the home low-temperature storage units in this metropolitan area—one A. T. "Tom" Millott, and he's got some pretty good reasons for thinking that way.

Under present conditions, when most everyone would like a low-temperature home storage unit and no one is permitted to buy one, it is "assumed" that there will be a tremendous demand for them in the postwar era. There is talk among accredited sales executives in the industry of an annual volume of several hundred thousand—perhaps a million—units per year of this type of equipment.

At the same time, while there has been some little thinking and discussion about *who* is going to sell such equipment, there has been practically no discussion of *how* it will be sold.

General thinking on the "how will it be sold?" score seems to be that the dealer's principal difficulty will be keeping the units in stock as homeowners storm his store to take them away from him.

But Millott is not looking at the sales picture on low-temperature home cabinets through any such rose-colored glasses. Granted that the buying public will be much more disposed towards the purchase of a cabinet because of their wartime experiences, the fact remains that prior to the war the dealers didn't exactly have to fight off the customers.

No one knows this better than "Tom" Millott. He handled the Deepfreeze line in St. Paul and the story of his early experiences in merchandising the low-temperature cabinets is at once interesting, illuminating, and sometimes amusing.

"When I first started out with the line," he relates, "I had trouble in getting my salesmen interested in trying to sell the cabinets. Sales were coming pretty easy on the other stuff that we had, so when the salesmen began to run up against some sales resistance they just sort of dropped any effort at selling it.

DEPARTMENT STORE BITES

"So I figured 'What this item needs is some startling promotion—a grand send-off that will not only arouse the attention of the buying public, but which will also get the salesmen interested in the product again, and make them feel like putting forth some effort on it.'

"In order to make a splurge, I followed the old formula of a tie-up with a leading department store, in order to get the help of the floor traffic and all the promotion advantages which a department store can give a product.

One Way to Promote Freezers—But Too Limited

This is the prewar exhibit of a Deepfreeze unit that Tom Millott placed in a sporting goods store, when he was trying hard to find the right key to the successful merchandising of this kind of equipment. To confine the market to hunters would be a mistake, he decided, and what he did is told in the accompanying story.

"The store's merchandising manager was sold on the scheme and we gave it the works. We cooperated on a newspaper advertisement that dominated a page. We had a large, well-organized and well-timed display of the cabinets in the appliance departments, and other units set around the store at places likely to catch the store traffic. And finally, we got to use the store's best display window—generally conceded to be worth several hundred dollars a day.

"The people came and looked—but that was all. After our promotion had run its course the department store's merchandising manager who had cooperated so wholeheartedly came to me and said:

BUT NOT A SINGLE BUYER

" 'Tom, I still believe this Deepfreeze unit is a great item, but do you know that this is the first time we ever ran a merchandising promotion on such a scale that we haven't sold at least *one* of the items that we were promoting?'

"Well, that was it, all right. People would come and look at it, but they just wouldn't buy.

"Then I thought 'This is a specialty item, what it needs is the push of a real specialty selling organization, one that isn't afraid to ring doorbells.' Our own organization didn't fit the bill, so I looked around for a dealer—or rather *the* dealer—in the community who could really go to town on an item of this kind.

"I found the dealer and got him sold on the product and he put some units on his floor and fired up his salesmen. But the people came and looked at the units, saw the price tag, shook their heads, and bought a refrigerator. The salesmen made a half-hearted try—you know how refrigerators were selling in those days—and why should they monkey around with this item that nobody wanted when they could sell as many refrigerators as they desired?"

"When this specialty selling angle flopped, I hit onto another scheme. The people who should have a crying need for a low-temperature cabinet, I figured, are sportsmen who kill good-sized amounts of game, and then have to give it away or throw

(Concluded on Page 15, Column 1)

BEFORE YOU DECIDE ON SELLING *Any* POSTWAR HOME FREEZER . . . LEARN WHY NONE CAN BE

"Just like" Deepfreeze

TRADE MARK REG. U. S. PAT. OFFICE

Q. Why do ALL foods stay Farm-Fresh...longer ...when preserved the Deepfreeze way?
A. Because only Deepfreeze provides 100% Primary Freezing Surface... Guards against food dehydration
Deepfreeze

Deepfreeze alone provides 100% Primary Freezing Surface

No other home freezer can be "just like" Deepfreeze because the Deepfreeze principle of 100% Primary Freezing Surface is protected by exclusive patents.

Performance-proved by thousands of Deepfreeze units in service since 1938, this exclusive and utterly different freezing principle effectively helps prevent food dehydration — keeps foods farm-fresh.

Here's why . . . with 100% Primary Freezing Surface, the entire inner wall of Deepfreeze is *freezing surface*. Temperature differential between the cold wall and food storage chamber never exceeds two degrees. Moisture is not drawn out of foods.

It all adds up to finer food protection, safer food conservation. Millions of future Deepfreeze buyers are learning the vital difference symbolized by the word Deepfreeze. Full-page Deepfreeze advertisements in leading magazines are paving the way for the day that Deepfreeze will be the BUY-word of millions. Deep thinkers are deciding it's Deepfreeze. Your inquiry invited!

AWARDED DETROIT PLANT — ARMY E NAVY

Cartridge cases, airplane nose and tail gun turrets, blood desiccating units and industrial freezing equipment are among the war products that Motor Products Corporation is proud to be making to speed the day of Victory.

Deepfreeze

TRADE MARK REG. U. S. PAT. OFFICE

MOTOR PRODUCTS CORPORATION

Deepfreeze Division: 2324 Davis Street, North Chicago, Illinois

Main Plant: Detroit, Michigan — Canadian Plant: Walkerville, Ontario

Motor Products Corporation
Deepfreeze Division, 2324 Davis Street, North Chicago, Ill.

Gentlemen: I am interested in getting full information regarding Deepfreeze postwar selling opportunities.

Name.....

Title.....

Company.....

Address.....

Air Conditioning FOR TOMORROW

NIBCO WROT FITTINGS AND TUBULAR PARTS

NIBCO Fittings are so accurately made that they save substantial sums in assembly costs. Specially designed equipment and a unique patented process make NIBCO WROT Fittings absolutely "round and square" and easy to align. Individual inspection with plug gauge tests of every item eliminates all guesswork. More than 1,000 standard fittings and other items are shown in our Air Conditioning and Refrigeration Catalog. We also welcome your inquiries for special tubular or cast parts. Remember Nibco in your post-war planning.

NORTHERN INDIANA BRASS CO.

ELKHART, INDIANA

VALVES AND FITTINGS SINCE 1904

Tom Millott Outlines Plan For Distributor To Sell Frozen Foods as Well as Cabinets

(Concluded from Page 14, Column 5)

it away because they haven't a place to keep it.

"Sportsmen should be happy at the thought of preserving deer, pheasant, and other game, I reasoned, and moreover there are many sportsmen who are quite wealthy and who could thus readily afford the purchase of a cabinet.

"Where would be the ideal place to sell a storage cabinet to sportsmen? The answer seemed quite obvious—the leading sporting goods store."

You've guessed it. The proprietor of the leading sporting good's store went for the idea hook, line, and sinker. He stuck some of the freezer-storage cabinets around his establishment, and the customers looked at 'em and sighed and "allowed" as how they might like to have something like that one of these days—and then bought a gun or some fishing tackle that probably cost as much as the cabinet.

But Tom Millott was far from the bottom of the barrel in his line of promotion tricks. His next guess was that maybe some special bait was necessary, possibly in the form of a premium. And as he got to thinking about a premium, Tom Millott hit upon the "perfect" premium to promote his cabinets.

HOW RADIO PROGRAM CLICKED

He got hold of one of the principal distributors of quick-frozen foods in the area.

"If I take a radio program and offer to give away $50 worth of quick-frozen foods with every cabinet I sell, will you supply the food in return for the repeated mention of your name on the program?" he propositioned the food distributor.

The answer was "yes" and Tom Millott was on the trail to sales success at last in his venture on freezer-storage cabinets.

He played his radio advertising and his showroom technique smart. All the emphasis was on that $50 worth of free food. He kept a sample $50 worth in a display cabinet on the showroom floor. The lure was strong. Mr. Millott began to get buyers for his cabinets.

He closed the sales himself. When the signed orders began to come rolling in, the salesmen's interest quickened. But he purposely held them off from the item, because he wanted to sell the first jobs "right" and to whet the salesmen's appetites in the meantime.

The tie-up with the food distributor was perfect, as far as it went, because the food concern was getting cheap and nearly 100% effective advertising. Whenever the $50 worth of free food was dished out, repeat orders were almost certain to follow.

After the first units had been out a while Tom Millott began to check back on his users, like any good salesman, and found out some things that were disturbing to him.

WEREN'T USING UNITS

The big disturbing factor was that the buyers hadn't made full use of the cabinet. Most users were apparently using it only as a sort of "novelty" appliance to keep some occasional frozen foods. Hardly a customer was making economical use of the cabinet.

What was needed to sell cabinets, and to keep them sold, Mr. Millott decided, was a plan whereby the customer's entire food requirements would be handled through the medium of quick-frozen foods, and in such a way as to greatly simplify the selection and preparation of foods in the home.

So Tom Millott set up as a distributor of frozen foodstuffs as well as a distributor of frozen-food home cabinets and he got just enough experience with it before food rationing set in to convince himself that it was the answer for a nice business in itself.

What he visualizes for postwar is a setup along the following lines:

THE PLAN FOR POSTWAR

(1) An operation in which the distributor will set up a food business to serve his freezer customers sold through dealers.

(2) A home service department will be set up at the distributor's headquarters to tie in with the food setup and in metropolitan areas, food will be delivered directly by the distributor with a refrigerated truck.

(3) In outlying territories where direct distributor service is impractical, either the dealer handling the units or a separate food outlet will be sub-franchised to handle the food service. Such an outlet will be given promotional cooperation through the distributor's home service department.

(4) Delivery would be on a weekly or semi-monthly basis on set days so that the customers could expect delivery at a fixed time.

(5) Customers would receive regular bulletin service and orders would be taken over the telephone in advance so that deliveries could be scheduled.

That's just the rough outline of the plan. But Tom Millott's enthusiastic approach to it readily puts it in the light of a crusade to free housewives from the onerous task of the daily ordering of food with its attendant problems of providing a tempting, varied, and nutrituous diet.

"Suppose," he says, "that a housewife is planning to have some friends or a club group in for lunch. She consults with the home economist who makes suggestions for the whole spread, including even specially prepared quick-frozen biscuit dough.

HOW IT HELPS HOUSEWIVES

"These items arrive with the regular delivery, and the housewife puts them together and arranges them in the proper order in the cabinet so that when the day of the luncheon arrives they are readily available.

"Then instead of being forced to bustle around all morning making preparations for the food for the luncheon, the housewife merely waits until a half-hour before the time she has planned to serve the luncheon, and then takes the food out of the freezer and puts it in her range or roaster, and that's about all there is to it.

"But more than that, quick-frozen foods can make possible the art of good eating on a broad scale. It is not only that quick-frozen foods in the raw are of the best quality, it is that the technique of freezing cooked meals will probably be advanced to the point where you can order entire meals of a favorite restaurant any place in the world, much the same as you may now buy some special salad dressing or other item that has been popularized in a famous eating place."

It may be that Tom Millott's ideas on the distribution of freezer-storage cabinets may seem out of line with the established order of merchandising appliances, but it can't be denied that his plan would help the user to realize the full benefits.

In conclusion Tom looks at the broad picture of setting home freezers in the postwar era about as follows:

"We may be sure that once civilian goods are released, such as automobiles, radios, television, refrigerators, and other 'experienced' items and food are released in plentiful quantities at convenient sources, the home freezer, as such, will be a poor competitor for the consumer dollar unless the freezer justifies itself in an improved way of living in keeping with a modern, fast moving world.

"However desirable the freezer may seem today, the public will soon forget once the spending spree starts unless plans are formulated to tie in with a frozen food service.

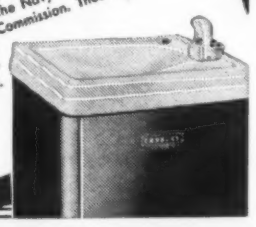
"What good roads were to the automobile, so frozen foods is to the home freezer, and Tom Millott proposes to supply the good road in his territory."

The two types of low temperature cabinets to be built by Portable Elevator Mfg. Co. are demonstrated at the Summer Mart at Chicago by A. H. Rose, Pelco sales manager. Mr. Rose, center background, points to the drawer type freezer, while at the right a visitor peers into a chest type freezer.

CORDLEY

THE BATTLE PROVEN
Electric
WATER COOLERS

THE PROVING GROUNDS OF WAR offer dramatic confirmation of the ability of Cordley Electric Water Coolers to withstand hard knocks. Supplied since 1942 for shipboard use to the Navy (Contract NKs 9982) and the Maritime Commission. These same Battle-Proven Coolers are now available for essential uses on land. Write for facts.



CORDLEY & HAYES
452 Fourth Ave., New York 16
Manufacturers of Water Coolers For 55 Years

WADSWORTH

A Tested Source for the MASS PRODUCTION of Small Precision Parts

Right now Wadsworth is making small precision parts for forty-five major companies which normally manufacture such products as radio equipment, refrigerators, automotive parts, precision instruments . . .

Typical example is a minute steel piece that receives thirty forming operations, sixteen of which are precision milling, although it weighs only 1/10th of an ounce.

After the war, manufacturers who will need small parts of this character will seek Wadsworth's small parts facilities in order to hold sales in competitive markets.

Let us discuss with you the postwar production of those small parts and sub-assemblies you may have found difficult to get in the past or may require tomorrow.

WADSWORTH FACILITIES

Die Making
Jigs & Fixtures
Gage Making
Model Building
Milling
Drilling
Turning
Stamping
Screw Machining
Hard Soldering
Heat Treating
Line Assembly
Polishing
Lacquering
Photo Etching
Silk Screening
Product Decorating
Metals Laboratory
Engineering Design
Product Design

CURRENTLY SERVING THESE INDUSTRIES

Aircraft
Automotive
Bearing
Electronics
Instruments
Machine Tool
Small Arms
Refrigeration

ARMY E NAVY

SMALL PARTS DIVISION

THE Wadsworth WATCH CASE CO., Inc.
DAYTON, KENTUCKY, SUBURB OF CINCINNATI, OHIO
PHONE COLONIAL 8194 • (CINCINNATI EXCHANGE)

Air Conditioning & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office; Established 1926 and registered as Electric Refrigeration News

F. M. COCKRELL, *Founder*

Published Every Monday by
BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit 2, Mich.
Telephone Columbia 4242

Subscription Rates
U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $4.00 per year; 2 years for $7.00. All other foreign countries: $6.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, *Managing Editor*
C. DALE MERICLE, *Assistant Editor*
ROSS H. POTTER, *Assistant Editor*
RUSSELL F. MATHEWS, *Assistant Editor*
Editorial Assistants: LYNDON DAVIDSON and BARBARA LEE

JAMES B. SMITH, *Advertising Mgr.*
ELIZABETH SMITH, *Assistant Bus. Mgr.*
HELEN C. HENDERSON, *Credit Manager*
RUTH RICHARDSON, *Subscription Mgr.*

On leave of absence to serve our country
U. S. Army: JACK SWEET, GEORGE L. COLLINS, GEORGE M. HANNING AND HUGH T. MAHAR
U. S. Navy: ROBERT P. NIXON, ED HENDERSON, JOHN R. ADAMS, AND ANDREW GANTT
U. S. Marine Corps: PAUL R. PARK
U. S. Army Air Forces: JIM MCCALLUM, GEORGE WATKINS AND WILLIAM WALTERS
Waves: MARGARET MARR

Member, Audit Bureau of Circulations
Member, Associated Business Papers

VOLUME 42, NO. 16, SERIAL NO. 804
AUGUST 14, 1944
Copyright, 1944, Business News Publishing Co.

Adventures In Postwar Planning

FROM the hush-hush, after-hours, behind-locked-doors stage, postwar planning has now moved out into the open, with a name-on-the-door front office and a staff. The magician has departed the scene. In his place is the man-of-experience with his sleeves rolled up.

And so many firms have had such varying experiences in the early, tentative stages that a body of tested precepts has been evolved of which less adventurous firms may now wish to take advantage.

In the first place, after much sweat and tears and gnashing of teeth, it has been finally established that "the old man" (the boss) had better direct the job himself.

EXPERTS AND YOUNG MEN NO LONGER DO PLANNING

Two organized theories previously prevalent, which allowed the boss to delegate this task, have now been discarded widely. They were: (1) hire a carnation-in-the-buttonhole expert; and (2) give the job to younger men.

The expert brought in from the outside to "coordinate" postwar planning has all too often failed to enlist the full cooperation of the remainder of the organization. He has created the usual political antagonism, made all the more bitter by the belief of the "regulars" that the Vice President in Charge of Postwar Planning was getting himself set for a very cushy job indeed in the bonanza days to come.

As for the "young men," to whom corporations have often entrusted postwar thinking in the belief that their youth and urge to do new and different things would get the corporation out of its old ruts—Selective Service seems to have caught up with those who were incautious enough to venture out of the comparative safety of engineering and production.

And so "the old man" is learning anew that if he wants this particular job well done—and of course he does, because the future of his company depends on it—he'd better see to it himself.

Second, "the old man" has come to a conclusion shared by most of his fellow industrialists; viz., that the primary purpose of his postwar planning must be to *create more jobs.* Widespread unemployment, he and his peers believe, is likely to result in such a tightening vise of government regulation that he might as well give up and retire to the farm.

The very life of his company is entwined with the success of the free enterprise system. And the continued success of that system—in a nation which will be an island surrounded by totalitarian states—depends upon the adequacy of employment opportunities.

NEW DESIGNS, NEW PRODUCTS TO BATTLE NEW COMPETITION

Third, his studies of the problem lead him to believe that *competition will be a lot tougher.* New competitors threaten his entrenched position from every side. Some of the weak sisters among the old-line firms are trying to figure out how they can use "the government" to keep such threats stillborn. The more astute know that in that direction lies total disaster.

The smart man in charge of an established business expects to run into new competition which will brandish new product designs. He may meet that challenge with new designs and new products of his own.

Even more, however, he plans to depend on his ace-in-the-hole: his *good name.* Anything he can do to protect and enhance the value of that good name will be like making payments on an insurance policy.

Instead of trying to "fight fire with fire," he is thinking in terms of fireproofing his own building.

THE SHOEMAKER WILL PROBABLY 'STICK TO HIS LAST'

Continuing along this line of reasoning, the established concern is thinking less and less about *bucking new fields.* Thus the original tack which much postwar planning took is now being reversed.

"If we try to invade some new field," they reason, "we'll be playing into the hands of those who are going to poke their snouts into ours—and we'll be at the same disadvantage. Should we shake dice in some new game, we may not only lose out there, but lose our stake in the familiar game as well."

It has further become apparent to those who have been applying themselves to postwar planning over the last 18 months that nothing will be gained—and much probably lost—if one sits back to "wait and see what the government is going to do." As one executive recently told us:

"We'll let the K. T. Kellers and the Charley Wilsons help Barney Baruch do the worrying about what the government is going to do with its machinery and plants. If we wait to see what the government is going to do next, our competition will get the jump on us. We intend to have plans ready for any set of circumstances, and hope that *we'll* be the ones who get off to the fast start."

UNPROVEN NEW PRODUCTS DON'T TEMPT BOSSES

Finally, they are not going off half-cocked in their enthusiasm for some new product or design. "The old man" remembers all too well that marvelous new development the company lost its shirt on back in 1928 or 1934—that time when the laboratory tests showed up so well but everything seemed to go wrong when the product went into use.

"We're not adverse to new ideas," they say, "but we know that there's no substitute for field testing. Let the newcomers take the early lickings on the pipe-dream models. We'll not launch our rocket-gun stuff until it has proved out in practice."

They'll Do It Every Time

By Jimmy Hatlo

YUP - I WAS THE FIRST GUY OFF THE FIRST TRANSPORT GOIN' OVER AND THE LAST GUY OFF THE LAST ONE COMIN' BACK. I WAS WITH THE OUTFIT THAT FIRED THE FIRST GUN. IN A WAY, I WAS PRACTICALLY RESPONSIBLE FOR THE SIGNING OF THE ARMISTICE. THE COLONEL CALLED ME IN ONE DAY AND HE SAYS, "LUSHWELL", HE SAYS ...
TO HEAR LUSHWELL TELL IT, THE REST OF THE ARMY JUST WENT ACROSS FOR THE BOAT RIDE...
HE WAS NEVER WITHIN 40 MILES OF THE FRONT. HE FOUGHT THE BATTLE OF VIN ROUGE AN' CAME OUT WITH A PERMANENTLY CROOKED RIGHT ELBOW..
O.K., AL.. HERE'S WHERE WE CAME IN... WHAT THE GOOD OL' COLONEL SAID TO HIM. LET'S GO..
SLIP HIM A MICKEY, PETE
AS IF THOSE KIDS DIDN'T HAVE ENOUGH OF THIS WAR WITHOUT SOME DONKEY REHASHING THE LAST ONE
PITY THE POOR G.I.'S THERE'S AT LEAST ONE IN EVERY TAVERN. THEY'LL DO IT EVERY TIME..
THANX TO MANY CONTRIBUTORS
1-24
Copr. 1944, King Features Syndicate, Inc., World rights reserved

LETTERS

REFRIGERATION CORP. SUPPLIES SMALLER REBUILT FREEZERS

Refrigeration Corp. of America
241 W. 64th St.
New York City, N. Y.

Editor:

Your attention is called to an article appearing in your July 3 edition under the heading of "Rebuilt Freezer Demand Rising, Reports Macy's."

In this article you state that according to George T. Mortland, sales manager of the Major Appliance Department, the price range of the reconditioned units is $294 for a 5-cu. ft. model to $894 for a 16-cu. ft. model. You also state in this article that these cabinets are rebuilt for Macy's by the Refrigeration Corp. of America.

This is to advise you that we are not the only suppliers and rebuilders of ice cream cabinets for Macy's and we particularly call your attention to the fact that we do not supply Macy's with a 16-cu. ft. reconditioned cabinet at $894, as reported in AIR CONDITIONING & REFRIGERATION NEWS.

The reconditioned cabinets we supply Macy are in the smaller sizes and are priced accordingly, taking the $294 as a base price and pricing the larger sizes according.

HARVEY FARBER, Vice President

LOOKS TO HOLLAND AFTER WAR

R. S. Stokvis & Sons, Inc.
New York 4, New York

Editor:

Do you have an extra copy of the July 17 issue to spare? If not, perhaps you could supply page 10 of this issue.

We have a friend who will be interested in the article entitled "Low Maintenance Cost Essential to Sell English Mass Market, Engineers Say" is the reason for this peculiar request in order that we can send it to him.

The article was very interesting. It is the first time we have seen one of this kind basing needs for refrigeration upon the countries climatic condition, operating, and maintenance costs to the household—three essential points for successful sales. We, Americans, think too much in terms of our surroundings, not realizing the climate and living conditions in other countries. We are interested in refrigeration for Holland in postwar.

Looking forward to hearing further from you.

B. S. PROPER

P.S.: Do you have any data on use of refrigeration in Europe—Holland, Belgium, France, etc.?

'NEWS IS A GREAT HELP'

Bassler Sales & Service
9 Wall St.
Norwalk, Conn.

Sirs:

Your AIR CONDITIONING & REFRIGERATION NEWS to which we have subscribed for the past five years is a great help to us and we would like you to know we find it invaluable in keeping up with refrigeration equipment, as well as it being a source for obtaining parts through your advertisements.

PAUL BASSLER

WANTS AIRMAIL BULLETIN SERVICE

Modern Appliance Co.
San Mateo, Calif.

Editor:

As we have previously written you, we are very pleased with the new condensed form news bulletin that you are publishing semi-monthly.

We would like to make the suggestion that you offer your subscribers at distant points airmail service on these news bulletins at your additional postage cost.

As you probably know, the Kiplinger Washington Agency has this airmail service for their subscribers which is very much appreciated.

We, and we believe many of your other subscribers would be glad to pay for airmail service which would hasten delivery nearly a week. Things are happening so fast that what is news today is obsolete a week later.

CHARLES R. ROGERS

Refrigerated 'Baths' For Plane Parts Are Used In Douglas Chicago Plant

CHICAGO — Refrigerating equipment does its share—an important share—in the production of the Douglas "Dauntless" and the Douglas four-motored "Skymaster" supertransport.

In the Douglas Aircraft Co.'s plant in Chicago, many of the parts used in the two planes are given six special baths and treatments to lengthen their wearing power. Refrigerating machines installed by Carrier maintain the required temperatures during the chromic acid bath that is one of the six operations. Other equipment cools nitrate tanks and spot welding operations.

MANY PARTS GET THE 'BATH'

Extrusions, angles, bars, wing spars, and other parts are given the special baths. Tanks, having a capacity of 9,000 gallons, are filled with a solution of 5% chromic acid for the chromic acid bath. The parts to be treated are immersed in these tanks from an electrically operated crane. Each part receives 40 volts of electricity, with 3½ amperes to each square foot of surface, for 30 minutes.

To prevent heat produced in the chromic acid bath process from raising the temperature of the solution, causing it to become less effective, the heat is removed by a mechanical refrigerating system. The system consists of a 40-ton Carrier refrigerating compressor, evaporative condenser, and necessary controls and connections.

MODE OF TEMPERATURE CONTROL

The temperature of the chrome acid bath is held between 93° F. and 98° F. Heat is applied when the low limit is reached. When the temperature reaches 98° F. the refrigeration is automatically turned on to cool the bath.

By operating within the specified temperature range the coating is not "too-soft" and the oxide film formed on the parts provides a protective coating. The film helps prevent the breaking down or corrosion of the metal when in contact with gas, oil, alcohol, salt spray, or when exposed to weather. The coating, forming an anodized surface has an excellent adherence quality for paint and is a non-conductor of electricity.

An official of the Douglas Aircraft Co. reports that the guess work of the bath operation has been removed by the temperature control.

Refrigeration consisting of two compressors, one evaporative condenser, control, and connections are likewise used to keep a nitrate bath at desired temperature. Here the temperature range of the solution is held between 40° and 60° F. for the best quenching operation. The capacity of the refrigerating system totals 20 tons cooling effect. Uniform and maintained bath temperature has increased production is the report on the use of the system.

Spot welding machines are served by a refrigerating system which furnishes 20 tons of cooling maintaining 50° F.

Protective Capes For Gas Attacks Made In Air Conditioned Factory

CLEVELAND—Equipped with new Cellophane gas capes produced in an air-conditioned factory here, Allied invasion forces are prepared to meet the threat of mustard gas should the Nazis resort to this method of warfare.

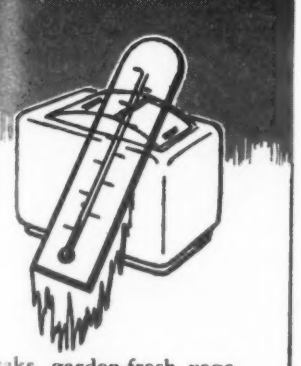
These capes do not supplant gas masks, which protect the soldier against suffocation and lung irritants, but do prevent mustard gas and other blisterers from seeping through clothing. The capes have transparent tops, so that, it is said, when a fighter ducks into one of them, his head pops into view like a gunner in a bomber turret.

Specially formulated Cellophane is cut, taped, and packaged in a constant 70% relative humidity at the Railley Corp. here for the Dobeckmun Co., prime contractor. Because Cellophane may crack in dry air at low temperatures, Carrier Corp. installed 12 industrial humidifiers to keep air at a constant moist level, thus insuring delivery of the capes to soldiers in perfect condition.

Each fighting man is furnished two gas-proof capes in a package about the size of a pocket magazine. A trained soldier can open and put on a cape in about five seconds, it is said.

WANTED

...IN POST-WAR AMERICA BY THOUSANDS OF AMERICANS EVERYWHERE



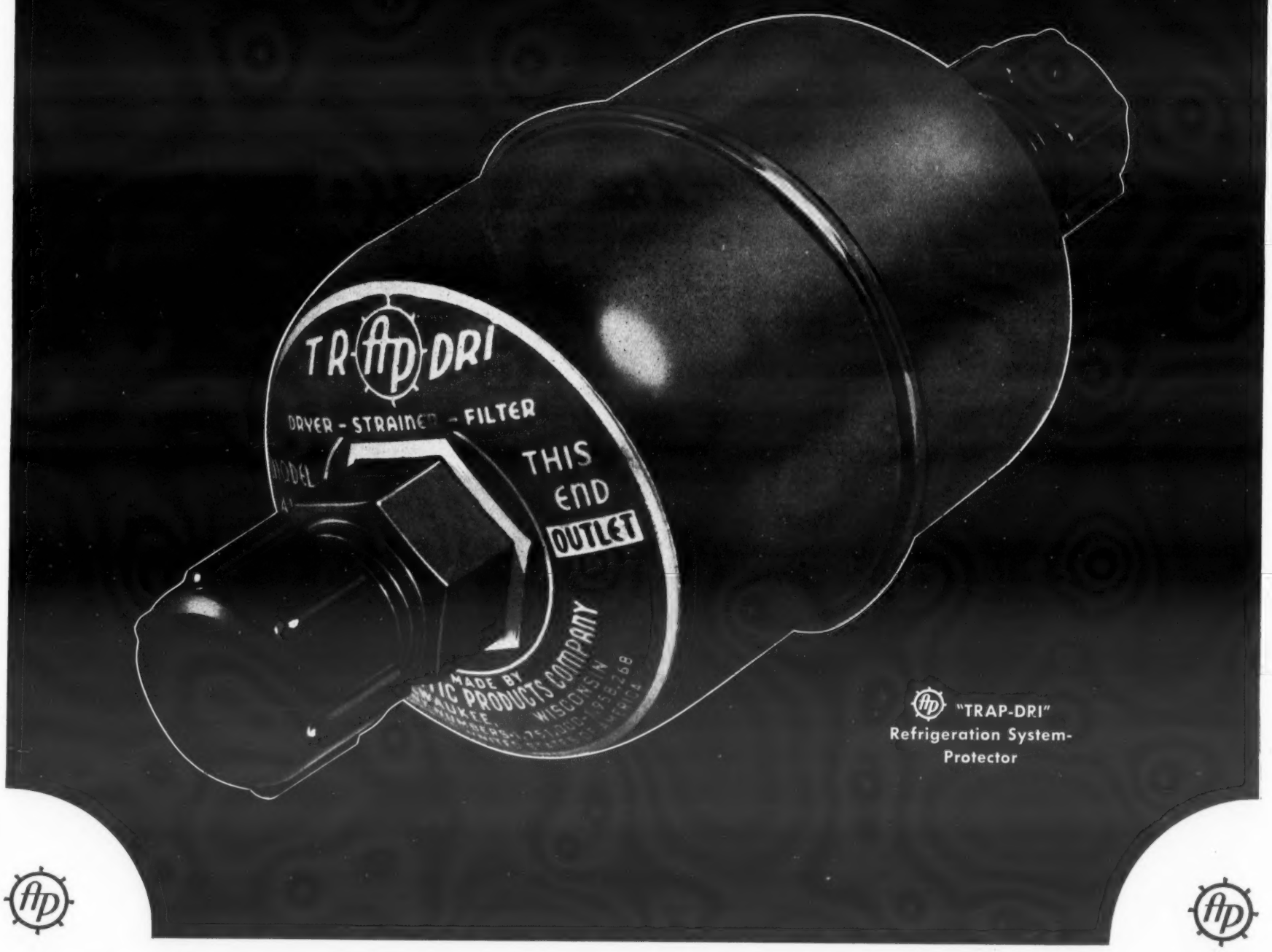
Juicy steaks, garden-fresh vegetables, fish, wild game and ice cream will be frozen in Sherer Freezers by thousands of Americans on farms, in stores, and rural homes the country over. These freezers, and display refrigerator cases of all kinds will be available when restrictions are removed — reach-in refrigerators, walk-in cooling rooms, Vegetaires and other commercial refrigeration products, as well as the Sherer Distributor franchise are available *now*.

Don't let war's end catch you napping! Get set for the profitable post-war market by availing yourself of this opportunity to distribute Sherer's complete Commercial Refrigerator line. Write or wire for details.

SHERER GILLETT CO.
MARSHALL, MICHIGAN

Dependability doesn't happen...

IT'S *BUILT INTO* EVERY A-P VALVE



"TRAP-DRI" Refrigeration System-Protector

▶ Troublesome moisture, gummy deposits, scale, dirt, solder particles and other impurities CAN'T affect your refrigerating efficiency—with an A-P "TRAP-DRI" in the refrigerant line!

▶ The first device on the market that combines *both* an efficient filter and an effective dryer, the "TRAP-DRI" offers 100% protection, permitting smoother valve operation and preventing freeze-ups.

▶ The filter element is as effective as a 900-mesh strainer—yet with *no appreciable pressure drop.* The Silica Gel is 1½ to 2 times more effective than other dehydrating agents.

▶ The A-P "TRAP-DRI" belongs on EVERY refrigeration system! It's easy to install.

AUTOMATIC PRODUCTS COMPANY

2450 North Thirty-Second Street · Milwaukee 10, Wisconsin

Export Dept. — 13 East 40th Street, New York 16, N. Y.

DEPENDABLE REFRIGERANT VALVES

Stocked and Sold by Progressive Refrigeration Jobbers Everywhere — Recommended and Installed by Leading Refrigeration Service Engineers.

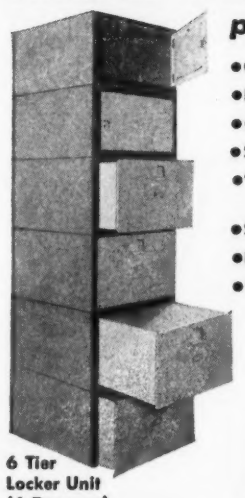
The Best Food Lockers are cheapest in the end

● The lockers you buy now *must stand up* for years, be easy to keep sanitary, and stay inviting in appearance. If they don't, you're in for a loss in heavy maintenance and early replacement.

When you invest in Safe-Way All-Steel Food Lockers you get the "World's Finest"... extra long life, utmost sanitation, smart styling, yet economical in price.

SAFE-WAY LOCKERS

protect your plant investment



- Quality of materials, workmanship guaranteed.
- Heavy steel construction; rigidly reinforced.
- Quick, easy assembly and installation.
- Smart, modern, streamlined appearance.
- "Sno-White" baked enamel drawers and door-fronts.
- Smooth, easy-rolling removable drawers.
- Easy to keep spotless inside and out.
- PERMATIZED . . . Special rustproofing of the steel before enameling prevents hidden rust chipping or blistering. No other locker manufacturer uses this special rustproof process.

"America's Leading Food Locker Manufacturers"
Member of the Frozen Food Locker Manufacturers & Suppliers Ass'n

6 Tier Locker Unit (4 Drawers)
ORDER TODAY!

SAFE - WAY
SAFE-WAY
FOOD LOCKER COMPANY
175 W. Jackson Blvd., Chicago 4, Ill.

Shortage of Component Parts Curbs Refrigeration Output, Senate Told

Editor's Note: This is the concluding instalment of a series of excerpts of recent hearings of a U. S. Senate Subcommittee on the matter of expanding the program for new refrigerated locker plant construction. This part is interesting because Fred Smith of WPB gives the reasons why production of refrigeration machinery is likely to be delayed.

Lack of Facilities Also Limits Production Today

Sen. Aiken. How recently has the situation been reviewed to determine whether the expansion of this program could be possible of accomplishment or not?

Mr. Frederick Smith. Present difficulty is not so much the lack of materials, as such, but the lack of capacity or facilities within the refrigeration industry to build and take care of the load that is now on it.

Now, the primary place where the bottleneck occurred is, to some extent not in the plants of the refrigeration equipment manufacturers, but more through them to the component parts which they have to purchase on the outside, which eventually become a part of the refrigeration equipment.

We recently made a check of eight typical compressor manufacturers, condensing unit manufacturers, and asked them to advise us what their best delivery dates were on items which they had to purchase on the outside.

On crankshafts, for example, which involves forgings, one company reported—I am taking only the AA-1 priorities—30 weeks, a second company reported 90 days to 145 days; a third company reported 16 weeks; a fourth company reported four weeks, and another company four weeks.

On connecting rods, which enter essentially as component elements and often times purchased on the outside, one company reported 20 weeks, another company reported 30 weeks, another company reported 20 to 145 days, another company reported 16 weeks, another company reported two weeks.

Valve plates, one company reported eight weeks, another company reported 12 weeks, another company reported six weeks, another company reported two weeks, another company reported two weeks.

On disc valves one company reported 12 weeks, another company reported 12 weeks, another company reported six weeks, another company reported 12 weeks, and another company reported two weeks.

You understand that these are all on AA-1 priorities. On pistons: one company reported 12 weeks, another company reported 30 weeks, another company reported 120 to 150 days, another company reported 16 weeks, another company reported four weeks.

On piston pins, one company reported 15 weks, another company reported 30 weeks, another company reported 120 to 150 days, another company reported 12 weeks, another company reported four weeks.

On thermostatic expansion valves, one company reported eight weeks, another company reported six weeks, another company reported six weeks, another company reported 10 weeks, another company reported four weeks.

On temperature controls one company reported 12 weeks, another company reported four to eight weeks, another company reported eight to 12 weeks, another company reported 12 weeks, and another company reported four weeks, and yet another company reported four weeks.

On dehydrators, for instance, one company reported eight weeks, another company reported 10 to 14 weeks, another company reported 10 weeks, and the last company reported four weeks.

On water valves, one company reported 16 weeks, another company reported six weeks, another company reported 10 to 14 weeks, another company reported 12 weeks, another reported four weeks and another company reported six weeks.

This is a cross section of the difficulties that the refrigeration manufacturers are up against to obtain these component parts which are necessary before the complete assembly can be delivered.

Mr. Frederick Smith. In general, I think the time is worse now, primarily due to the manpower difficulties in the plants of the suppliers.

Sen. Aiken. It is a little worse?

Mr. Frederick Smith. It is a cumulative situation that goes right down the line through every sub-supplier.

Mr. McTigue. One other reason for that is that these components are in greater demand this year as repair parts than they were last year as repair parts.

Mr. Sterling Smith. That is correct.

Sen. Aiken. What is the situation in regard to second-hand equipment and material?

Mr. Frederick Smith. On second hand material, we are pretty well cleaned up. We have no restrictions on the sale of second-hand material.

Sen. Aiken. What do you really think is the prospect for obtaining an extension and expansion of this program?

I have been deluged with requests from all sides and from a good share of my colleagues to see what can be done for the expansion of this program, both for community locker plants, and securing releases of some material for individual units.

Mr. Frederick Smith. The attitude of the Requirements committee, in general, and I think that we are pretty much in agreement with them, is that since we are not up to schedule on military production, and since there is a—or until such time as we know where we stand in the coming invasion, there is a hesitancy to request any increase of civilian production, unless there is some very strong need for it.

We are not up to schedule on many of the Navy programs. This, again, is due primarily to the inability to get component parts into the plant of the refrigeration manufacturers in time for them to make delivery on schedule.

Any additional burden that is thrown on them would just aggravate that situation that much more.

I believe any increase in the locker program, if it were proved, would not be affected in terms of completed locker plants much more before the fall months.

This program carries a lower priority than militray needs naturally, and any increase that would be brought about would have to be scheduled at the end of existing military requirements.

Sen. Aiken. Then, you do not think the prospects are very good for the extension of this program until the armed services say that they are caught up, and the industry says that they are practically caught up?

Mr. Frederick Smith. Either until the military requirements are set up, or until such time as the component situation regulates itself so that we have met the supply of components that is desired.

Commercial Freezers Now Receive More Materials

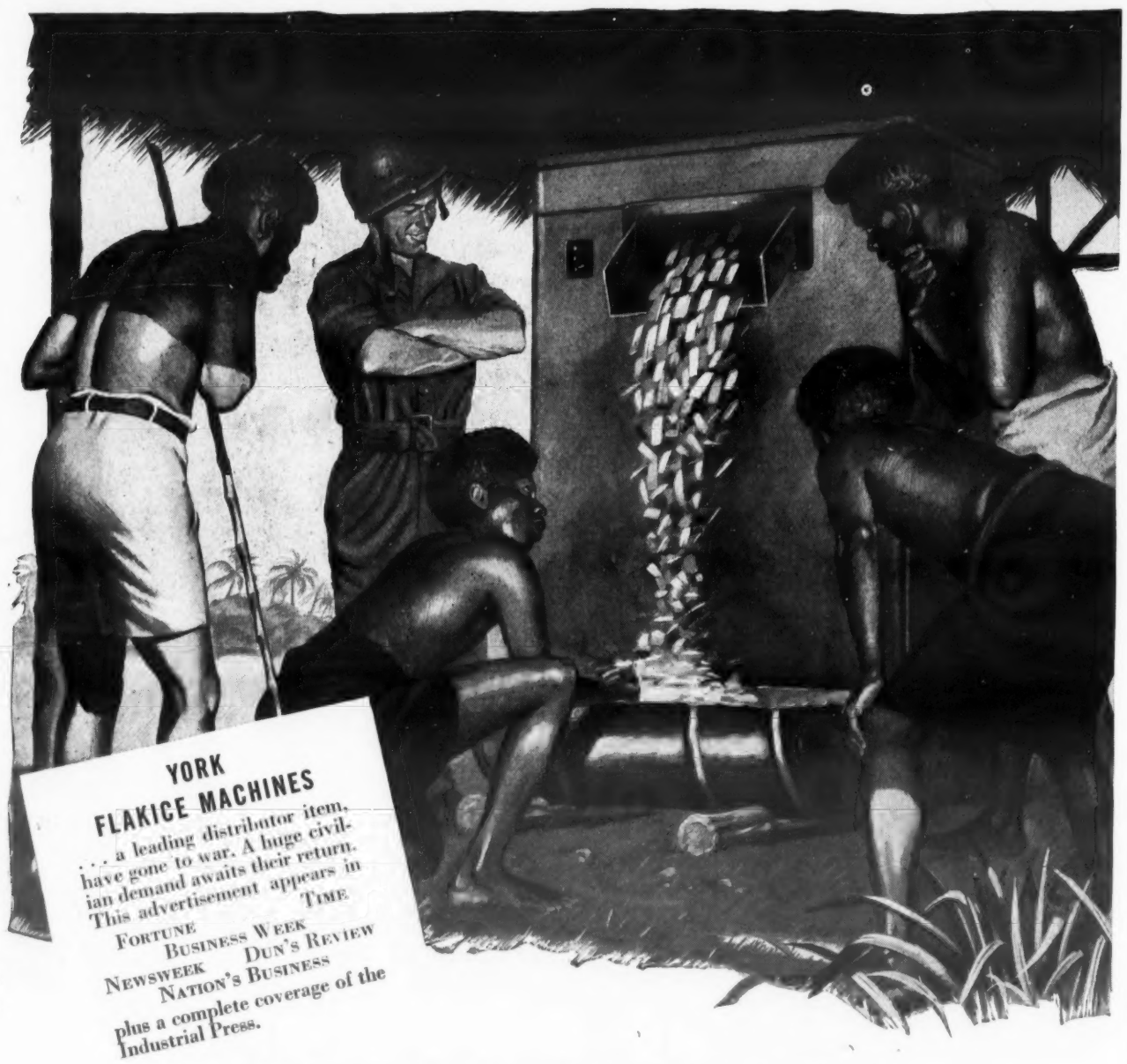
Sen. Aiken. What is being done towards furnishing material for the commercial quick-freezing plants? Has that allocation been stepped up so that right now it is as much as it was, say, a year ago?

Mr. Frederick Smith. There was a substantial increase in the commercial quick-freezing plants a year ago this winter.

Sen. Aiken. As I recall it, they got the entire allocation of material for the first quarter of 1943. That was one reason that we called the hearings when we did last year.

Mr. Frederick Smith. Since that

(Concluded on Page 19, Column 1)



YORK
FLAKICE MACHINES
. . . a leading distributor item, have gone to war. A huge civilian demand awaits their return. This advertisement appears in
TIME
FORTUNE
BUSINESS WEEK
NEWSWEEK
DUN'S REVIEW
NATION'S BUSINESS
plus a complete coverage of the Industrial Press.

ICE DIPLOMACY

"Ice-e-e! Ice-e-e!" In south sea Polynesian, this new word means friendship and help for the Seabees against the lurking Jap! The ice that a York FlakIce machine produces, at the flick of a switch, is the thing which influences natives more than bright beads or any of the usual tinsel. *Ice!* Cascades of this strange, delicious stuff!

Like the modern weapons of war they travel with, FlakIce machines do their job with amazing swiftness. In just a few minutes after water and power connections are made, frosty ribbons of ice pour from those compact self-contained machines. No complicated assembling process. No tedious hours of waiting for ice to form.

Our Navy finds a legion of uses for FlakIce. They range from ice water for the parched throats of fighting men to the application of ice for local anesthesia and the prevention of shock in surgery.

FlakIce comes in the form needed . . . small curved ribbons that do not adhere to one another . . . just right for the ice packs that reduce blood loss and pain.

Here is another of the many York products produced and perfected in peacetime that has found a vital place in the march to Victory!

York Corporation, York, Pennsylvania.

YORK REFRIGERATION AND AIR CONDITIONING

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

ELECTRIC WATER COOLERS

ALL SIZES FOR NAVY AND LAND USE
MEET GOVT. SPECS.
QUICK SHIPMENT
Exclusive Dealer Franchise
MFD. BY
THE REVELATION CO.
L. E. RABJOHN
2801 San Fernando Rd. Los Angeles 41, Calif.

ARMY E NAVY

"BIRD - IN - HAND" FORMULA

Post war visionaries would change the world over night. But Merchant & Evans Company, like other responsible manufacturers, will risk being called "conservative" by refusing to release untried, unproven mechanical changes just because they are new—or revolutionary. M & E's strong position as a maker of quality compressors has been built on the principle of 'time and test' before sale to the public.

M&E EST. 1866

MERCHANT & EVANS COMPANY
PHILADELPHIA, PENNA. • Plant: LANCASTER, PENNA.

Big Equipment Is Increased

(Concluded from Page 18, Column 5)

time there has been very little expansion in the industry.

The chief programs of expansion have been in the conversion from cold storage space to freezer space, which was carried out this last winter.

At the present time there has been a definite expansion in the ice plant capacity. It was a very necessary one.

Mr. Millard. The requirements for frozen meat.

Sen. Aiken. Then you would say that the allocation of materials for consumer needs increased the allocation of materials for the commercial industry, at a faster rate? That is, did the allocation of materials for consumer needs increase faster than the allocation of materials for the commercial industry?

Mr. Frederick Smith. No. The increase has been greater in the processing of foods. In other words, the increased refrigeration equipment in the last six months has been primarily for locker plants, and the installation of larger quick-freezing units in ice plants, and also for larger ice plants where larger ice capacity was needed.

There has been an increase, not as great, in the amount of smaller equipment of a similar nature available for maintenance, repair and replacement of the market-restaurant type refrigeration equipment. Those are more or less smaller units.

'Astronomical' Demand Seen By Sterling Smith

Statement of Sterling Smith, Chief, Refrigeration Section, War Production Board.

Mr. Sterling Smith. The compressing equipment, expansion valves, and the coils are made in the plants which are jammed up with military orders.

And they also use fractional horsepower motors, which are very, very short of supply now.

The matter of getting these expansion valves, controls, coils, and similar equipment goes back into the *skilled* labor of the refrigeration industry.

Sen. Aiken. You are not granting any priorities for the manufacture of individual compressor units now?

Mr. Sterling Smith. No, sir.

Sen. Aiken. If you could, have you any idea what the demand would be?

Mr. Sterling Smith. Astronomical.

Sen. Aiken. I agree with you. It is certainly going to be one of the biggest businesses as soon as material is available.

Bove Raps Definition Of Term 'Producer'

Statement of Peter Bove, counsel for the National Frozen Food Locker Association Manufacturers and Suppliers, Chicago, Ill.; also certain Vermont farm cooperatives.

Mr. Bove. We would like to have all available material put to use now; this is the time to put it to use; we should not be compelled to wait till after September.

We would, both from the Vermont point of view, and from the manufacturers' point of view, like to see the restriction that has been put onto this program in the way of definition of "producer" be eliminated.

A year ago the program was conceded as essential, and the requirements which were strong enough at that time should be O.K. now so that any additional restrictions put in now would just be discouraging rather than incouraging the locker program, and therefore, they should be removed.

I think that the fact that the people had to rent 60% to 75% in advance, in rural communities, certainly was sufficient restriction.

I think this is just an added burden, and smacks of insincerity somewhat, because it tells the people in the field today that a man has to be an actual, bona fide farmer before he can have a locker.

Sen. Aiken. I had received the impression that the people in the rural areas thought that the non-producer would be largely cut out in these new requirements. Did you receive that same impression?

Mr. Bove. Yes, sir.

Sen. Aiken. When I read these rules and saw that a "producer" was thus and so, and would have certain privileges, I thought that certainly as soon as this was sent out to the rural areas, this press release which carried this definition of "producer," that that mistaken idea—I have learned here today—would be developed.

It conveyed the impression that unless they were actual producers that they just had not right to make use of these facilities.

Mr. Millard. I hope that I have made it very clear that in working out these rulings our only purpose was to provide an equitable and as far as possible, fair coverage of the needs of the rural communities with the very modest supply of locker plants that was available.

I think it should be pointed out, though, that the program, it it were doubled up, still would not make a very heavy impingement on materials when we figure on 3,000 tons of steel in the current program as compared with 2,000,000 tons of steel as against tin can program, you see it is very small in relation to our container program, or our total refrigeration program.

It may be, as the gentleman has pointed out, that a very careful reconsideration of the entire proposition might turn out some pertinent facts which would permit us to grant some expansion of the program.

Do you agree with me on that, Fred?

Mr. Frederick Smith. We could reconsider the whole thing, and see what the possibilities might be.

Program for Lockers Should Be Expanded

Sen. Aiken. I know that the committee feels, and I think I can safely say that almost every member of the Senate feels—from the way they have been getting after me—that if it is humanly possible that we should go ahead and expand this program.

I think that people are altogether too complacent over the food situation just now.

A year ago there were scared sufficiently that they put in the Victory Gardens and produced the food and we did not have a famine.

Now, there are so many of them they seem to think there is no need of trying to do anything to produce food. I believe they are entirely wrong about that. I think it is just as necessary today, to save every pound of food that we can as it was a year ago. At least, if the invasion goes as successfully as they hope it will, there will certainly be millions of people available to be fed from our commercial storage houses.

The less burden that is put upon these houses to furnish people living in the country villages and rural communities, the more they can contribute toward the feeding of the liberated nations when the time comes.

I do want to express an earnest hope that we can in the near future have an expansion of the program so that we will more nearly meet the needs of the country, and particularly the rural communities in this respect.

Mr. Hill. Senator, we appreciate very much the feeling of Congress on that, because we have the feeling that we must do as much as can be done.

We realize all the time, however, that each program has to fit in with each other program. We can not take all the materials for one program.

The general public does not seem to realize that food is an extremely temporary thing.

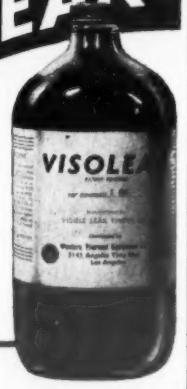
Food is nearly all consumed within 12 months of the time it is produced, and it commences to disappear immediately upon being produced.

It must be continually reproduced. But some people think that because we have to have sufficient to meet the need right now, that we are going to have it in the future. It does not mean that at all.

Sen. Aiken. Would you say, Mr. Smith, that in view of the fact that there is such a strong sentiment that this program be expanded if possible, that there might be a possibility of a review of the situation, and a possibility of reconsideration looking towards a greater allocation of material?

Mr. Frederick Smith. We would be very glad to review the situation with the War Food Administration and see if something can be worked out.

FIND HIDDEN REFRIGERANT LOSSES WITH VISOLEAK



Save TIME MONEY REFRIGERANT

IT'S SIMPLE —

Just place ***VISOLEAK*** in the high side of the system. This finely-treated colored refrigerant oil will penetrate every nook and cranny and spot those hard-to-find leaks. If refrigerant can leak out, so can ***VISOLEAK.*** A red stain will mark the leak for your instant repair.

IT'S SAFE —

Made from the finest oils, it's non-toxic, non-poisonous, non-corrosive and non-inflammable. Can be used safely and effectively with ANY refrigerant.

IT'S ECONOMICAL —

Wholesale Prices		Save 10% on case lots
4 ounce bottle	$1.00	48 bottles
8 ounce bottle	1.75	24 bottles
1 pint bottle	3.00	24 bottles
1 quart bottle	5.00	12 bottles
1 gallon can	16.00	6 cans

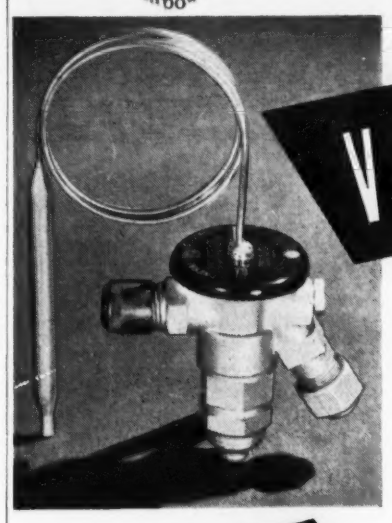
See your jobber or write for complete information

WESTERN THERMAL EQUIPMENT COMPANY
5141 Angeles Vista Blvd., Los Angeles 43, Cal

Please send me complete details about VISOLEAK.

Name_____

Address_____



V-200 THERMAL EXPANSION VALVE

Unsurpassed Sensitivity and Dependability

FEATURES

Readily removed orifice cartridges eliminates necessity for stocking several sizes for low tonnage installations.

Carefully lapped hard faced ball insures positive tight shut-off.

Thoroughly field tested.

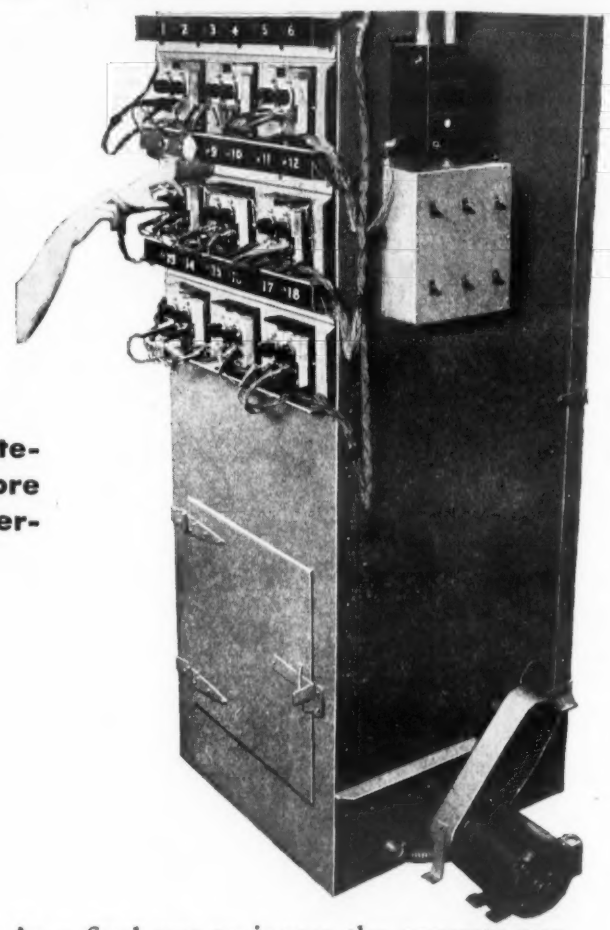
Handles freon, methyl chloride, sulphur dioxide.

Write for Catalog 52

GENERAL CONTROLS
801 ALLEN AVENUE • GLENDALE 1, CALIFORNIA
Branches: Boston • New York • Philadelphia • Detroit
Cleveland • Chicago • Dallas • Denver • San Francisco

HERE IS YOUR ASSURANCE OF ACCURACY

Careful calibration of White-Rodgers Controls is one more reason for their accurate performance.



8 EXCLUSIVE FEATURES OF WHITE-RODGERS HYDRAULIC-ACTION TEMPERATURE CONTROLS

1. May be mounted at any angle or position, above, below or on level with control point.
2. Hydraulic-Action Principle incorporating solid-liquid filled bulb and capillary provides expansion force comparable to that of a metal bar.
3. Diaphragm motion uniform per degree of temperature change.
4. Power of solid-liquid charge permits unusually sturdy switch constructon resulting in positive contact closure.
5. Heavier, longer-wearing parts are possible because of unlimited power
6. Dials are evenly and accurately calibrated over their entire range because of straight-line expansion.
7. Controls with remote bulb and capillary are not sensitive to change in room temperature. Accuracy of control is not affected by temperature changes in surrounding area.
8. Not affected by atmospheric pressure. Works accurately at sea level or in the stratosphere without compensation or adjustment.

As a final test to insure the accurate performance of White-Rodgers products, each control is carefully checked under actual working conditions. For example, the fan and limit controls shown here are being adjusted while installed on equipment simulating actual furnace conditions. Thus accurate calibration and positive differential setting is assured.

These tests, and others like them, have been designed to provide accurate temperature control for you and to make the name White-Rodgers synonymous with *dependability* in the control field.

HYDRAULIC ACTION CONTROL

Fuel-Saving Starts With CONTROL

WHITE-RODGERS ELECTRIC CO.
1211H Cass Ave. St. Louis, Mo.

Controls for Refrigeration • Heating • Air-Conditioning

Ever Think of Freezing Leftover Potatoes Or Coconut Cake? Then Bend an Ear

BUFFALO—New slants on home freezing of foods are being presented in a highly entertaining manner in the monthly bulletin published by Jewett Refrigerator Co. here for users of home freezers.

Willing to "try anything once," the author of these articles has frozen a great variety of foods at home with considerable success. He is Romeyn Berry. He combines farming with writing and radio broadcasting, and for 17 years was graduate manager of athletics at Cornell University. His articles have appeared in the "American Agriculturalist," the "Farm Journal," and the "New Yorker."

Here are some excerpts:

"We're veteran freezers—not war ones—on our farm. We started doing it a full year before Pearl Harbor. We're long past the early stage of sticking to the book and the college bulletins to find out what you can freeze to the best advantage, and how to do it. We're in the second phase now, ascertaining by trial and error what you can't freeze.

"We didn't have much luck with lemon meringue pie. Also we unwittingly froze a fountain pen for a full year—it must have slipped from our pocket when we were groping for the last package of 1941 pork chops. It didn't improve the fountain pen much. But we've been successfully freezing bread now for quite a while; just a loaf or two to have on hand fresh for emergencies.

HOW LONG TO KEEP SAUSAGE

"The book is only partly right, we find, when it tells you not to freeze bacon and sausage with the seasoning in it. We freeze both with success up to four or five months. And all our bacon and sausage gets eaten up in less than five months anyway. But there is a deterioration both in appearance and flavor when you hold seasoned sausage in the freezer over a year. We discovered that when a label slipped and a package of sausage stayed in two years because we thought it was bullheads.

"Most of the scientific research that has been done and reported in this field, has been done, we suspect, in connection with commercial freezing. There, of course, appearance is extremely important. This is less so in the home. Take eggplant. The book says to add a few crystals of citric acid. We did, but we don't any more. Without it the eggplant darkens and you couldn't sell it. But we like the flavor better when the citric acid is omitted.

FREEZING THE CAKE

"We claim to be the Columbus who first discovered you can freeze a coconut cream birthday cake. Just before supper on our birthday a neighbor brought us in such a cake—a noble one, fresh and moist and all wrapped up in billows of cellophane. We were pleased and embarrassed. Embarrassed because we were going out to dinner in 10 minutes and leaving on a week's trip the following morning. So we stuck it in the freezer just as it was and departed. When we got it out and thawed it two weeks later, it was just as fresh and moist and delicate as the day it was baked.

"You can freeze left-over mashed potatoes. We've done it. You can freeze the remnants of a lamb stew. We've done that, too. We don't remember whether it's feasible to freeze what's left of an endive salad dressing, but we propose to darn well find out in the immediate future.

"You might get the impression from the above that our personal research in the freezing field is being conducted on a low level. But, all this has a distinct bearing on the postwar uses of that freezer father brought home when he was suffering from steak-trouble and coupon-panic.

"Some day pork chops will again be 15 cents. The butcher will be delighted to deliver three. And the business man, with a family of two, will stop buying a side of beef to thwart the Ration Board. As far as father is concerned, the home freezer can then go up to the attic along with the home-brewing outfit.

GREAT FOR LEFTOVERS

"But it won't go to the attic. The business man's wife will want to keep right on using it. I don't know what other things she'll use it for—freezing is still in its infancy and your correspondent has just started freezing all the things the book says you can't freeze—but she'll certainly want to keep the thing going, to freeze leftovers; mashed potatoes, lamb stew, creamed minced turkey on toast, puree of split-pea soup.

"Take turkey! On the fourth straight day of turkey you'd better give the family scrambled eggs—and freeze the creamed minced turkey on toast. After a month of rest, the same family that would have gagged the fourth day will hail your creamed minced turkey as an 'a la.'

"The war will change everything but women. Few women with a well equipped kitchen seriously object to throwing together a good dinner two or three times a week. At least they'd rather do that than put up endlessly with exasperating help. They won't stay in the kitchen, however, every day and all day. But, with father's war-time meat freezer available for taking care of leftovers, and turning them into future 'a la's,' mother will have to turn to and really cook no more than two days a week, we'd say."

On the subject of home food freezing in the postwar era Mr. Berry has this to say:

SEES USE FOR 2 BOXES

"Freezing boxes are still in the Model-T stage. When this thing is over there will be new and improved freezers on the market. They will make our old box just so much junk. That's what we are told by false friends who seek to annoy.

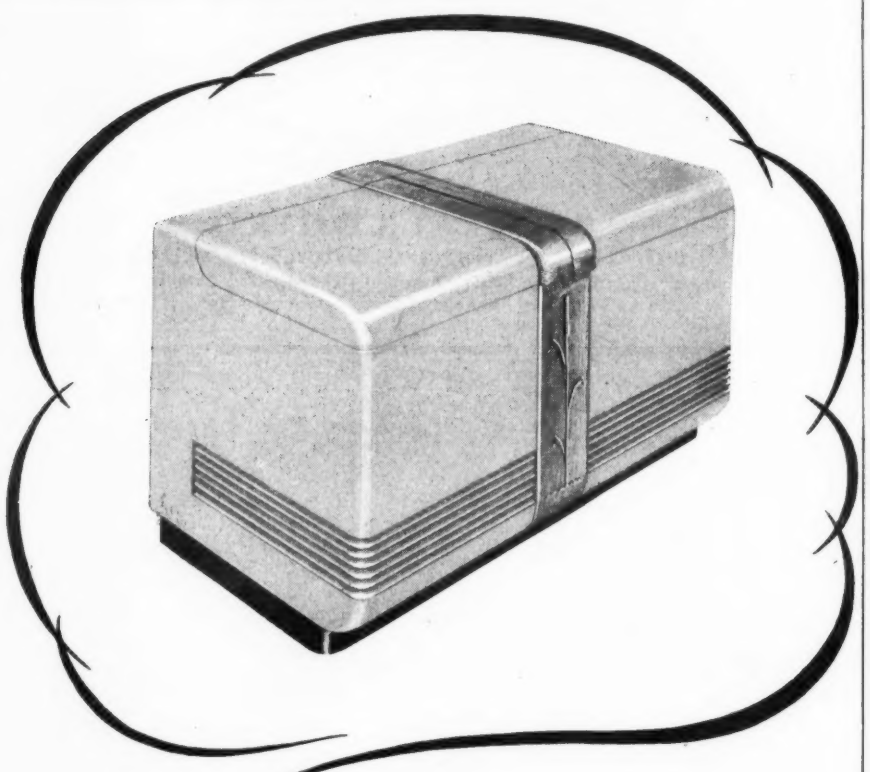
"Stuff and nonsense! When Mr. Ford gave up and started to make automobiles, we bought one. But, we hung onto the Model-T, too. We simply became a two-car family. Something of the same sort will occur, we suspect, with freezers.

"What if some munitions maker came out right now with a transparent freezer in which you could locate that lost package of 1941 bullheads without removing the lid and tossing out the 1942 Black Beauty eggplant and last year's Thomas Laxton peas? We'd buy one in a minute. A tongue-tied salesman with a squint could close the transaction and leave the thing in our front yard. He could drive off with our money, but not with our old box. We're keeping that, too.

WANTS TO BE ABLE TO 'PEAK'

"When the new models appear the sales force can stay right in the office and answer the telephone. They'll have no time to get out and woo new prospects. The calls will be coming in too rapidly from veteran freezers like us who have a full box and a bumper crop in the immediate prospect: 'Never mind about the outside thermometer, the automatic defroster, and fool-proof inventory of contents. Can you make delivery before our veal calf becomes baby beef?'

"Our vision of a sub-zero future is still seen as through a glass—darkly, but one or two landmarks are beginning to take form in the murk. There will be no such thing as a single, all-purpose freezing box equally adapted to the needs of a three-room apartment and a family farm with more family than farm. But, if somebody designed a freezer along the lines of an accordion that would expand and contract to meet changing conditions he'd be getting close to the solution."



In the "Post-War Plans" of many Farm Families--

The BEN-HUR Farm Locker Plant

Talk to any farmer about a farm locker plant and his first comment will be, "wish we had it now." And he'll follow with the promise that food freezing and frozen storage is the FIRST thing he's going to add after the war.

For most farmers already know the benefits of owning a BEN-HUR FARM LOCKER PLANT . . . the advantages of freezing and storing farm-grown vegetables, meat, poultry for delicious meal variety weeks and months later . . . the economy and savings in food costs . . . the satisfaction of preserving the finest of their own produce . . . the time saved in avoiding shopping trips to town.

This is evidence of your future market for new BEN-HUR FARM LOCKER PLANTS—a volume market ready just as soon as they can be produced.

Let us put your name on the list to receive complete data and sales information on BEN-HUR FARM LOCKER PLANTS, when this data can be released.

Today . . . back our fighting men with more war bonds

ARMY-NAVY "E" Awarded Ben-Hur for outstanding achievement in War Production.

BEN-HUR MANUFACTURING CO.
634 EAST KEEFE AVE. - MILWAUKEE 12, WISCONSIN

Remember...

BEN-HUR FARM LOCKER PLANTS

FOR *Curing the Ills* IN REFRIGERATION AND AIR CONDITIONING SYSTEMS

● When a system is sluggish we recommend an ACME heat exchanger and oil separator as a cure for this ailment.

When compressor capacity is on the border line for load requirements—these additions to the system will be found highly effective.

Many hundreds of installations in actual operation substantiate this suggestion.

For complete information—write for Catalog No. 12.

ACME INDUSTRIES
JACKSON, MICHIGAN

OIL SEPARATOR

The chief purpose of an oil separator is to remove oil from the discharge gas and return it to the crankcase. An oil separator should return the oil to the compressor crankcase before it reaches the evaporator side of the system. Acme Oil Separators are designed for installation between the compressor and the condenser.
Write for Catalog No. 15.

ACME PRODUCTS

ACME PRODUCTS
Evaporative Condensers, Ammonia Condensers, Freon Condensers, Dry-Ex Water Coolers, Flooded Water Coolers, Hi-Peak Water Coolers, Pipe Coils, Heat Interchangers, Oil Separators, Liquid Receivers, Forced Convection Units, Heat Exchangers. *Write for Catalog on any item*

DOLE
VACUUM PEATE
COOLING and FREEZING UNITS
CHICAGO

FOOD MUST BE CONSERVED

Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.

GENERAL REFRIGERATION DIVISION

Yates-American Machine Co. Beloit, Wis.

Lipman
AUTOMATIC REFRIGERATION

Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Flash Gas

(This is the first of two articles)

Expansion valves or high-side or low-side float valves should pass liquid refrigerant from the liquid line into the evaporator. The cooling effect is obtained from the change from a liquid to a vapor. Therefore, if any vapor exists in the liquid line and passes over through the valve into the evaporator, it simply takes up space instead of liquid refrigerant and furnishes no cooling effect; the expansion valve is reduced in capacity and so is the evaporator.

We want the liquid to vaporize in the evaporator, not in the liquid line. Vapor that is thus boiled off the liquid line is known as "flash gas." It is important that the liquid refrigerant fed to the expansion valve be as nearly as possible a pure liquid with no flash gas in it.

For any certain temperature the refrigerant stays as a liquid only so long as its saturation pressure is kept on it. If that pressure is reduced the liquid evaporates, or, as we say, "boils" and changes to a vapor. On the other hand, if we keep the pressure the same but add heat, the liquid also vaporizes. Therefore flash gas in the liquid line may be caused by pressure drop or temperature rise of the liquid.

For example, we have an air-cooled "Freon-12" condensing unit operating in an 80° F. room. The condensing pressure is 120 p.s.i. which is 35.9 p.s.i. above the saturation pressure of 84.1 p.s.i., corresponding to 80° F. (See article in June 19, 1944 issue for explanation of this difference.) This 120 p.s.i. is the pressure on the "Freon" at the condensing unit but not necessarily at the expansion valve.

Liquids (or gases for that matter) flowing in pipes set up a certain amount of friction, the amount depending on the kind of liquid, the amount of liquid per minute, the size and length of the pipe, the number of turns or fittings, and the condition of the inside of the pipe. The flow of liquid is retarded by this friction and the result is a drop in pressure from the inlet end of the pipe to the outlet end. If the pipe or tube comprising the liquid line is long, small, rough on the inside, and has several sharp bends or restrictive fittings, the pressure drop may be high.

If, in our example, this pressure drop is more than 36 p.s.i., the pressure of the liquid "Freon" just as it enters the expansion valve is lower than the pressure (84.1 p.s.i.) corresponding to the 80° room temperature so naturally it "boils" and the resulting vapor takes up a great deal of room in the liquid line, 32 times as much room, in fact, as the same refrigerant did as a liquid. Even if a small amount of liquid boils, it can greatly reduce the amount of pure liquid.

It is considered good practice to lay out an installation so as to allow about a 5 p.s.i. pressure drop in the liquid line so that on installations employing air-cooled units there is little danger of the formation of flash gas due to pressure drop in the liquid line; for in the above example the pressure drop would have to be over 36 p.s.i. before trouble was encountered.

Water-cooled units are more susceptible to formation of flash gas in the liquid line due to pressure drop. For example, if a "Freon-12" water-cooled unit were operating in this same 80° F. room and the condensing water were 60° and the water valve were set to maintain about 90 p.s.i., then there could be no more than about 5 p.s.i. pressure drop in the liquid line before the formation of flash gas would start, for the saturation pressure corresponding to 80° is 84.1 p.s.i., a difference of about 6 p.s.i. from 90 p.s.i.

If the counterflow principle were used in this condenser, however, the liquid refrigerant would probably be sub-cooled to about 65° when it left the condenser, but by the time it passed through the receiver and the liquid line, it would be warmed possibly to room temperature; or, perhaps, if the liquid line were short it might be still as cool as 70° F. (corresponding to a pressure of 70.1 p.s.i.) in which case there could be a pressure drop of 20 p.s.i. before there would be any formation of flash gas.

From the above it is evident that excessive pressure drop in liquid lines must be avoided. The tubing used must be of ample size for the load and considering the length of run. Avoid sharp bends.

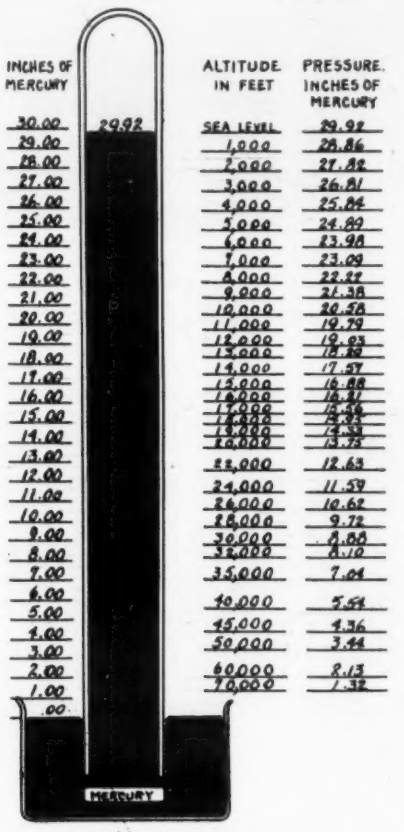


Fig. 2—Effect of altitude on air pressure is shown above.

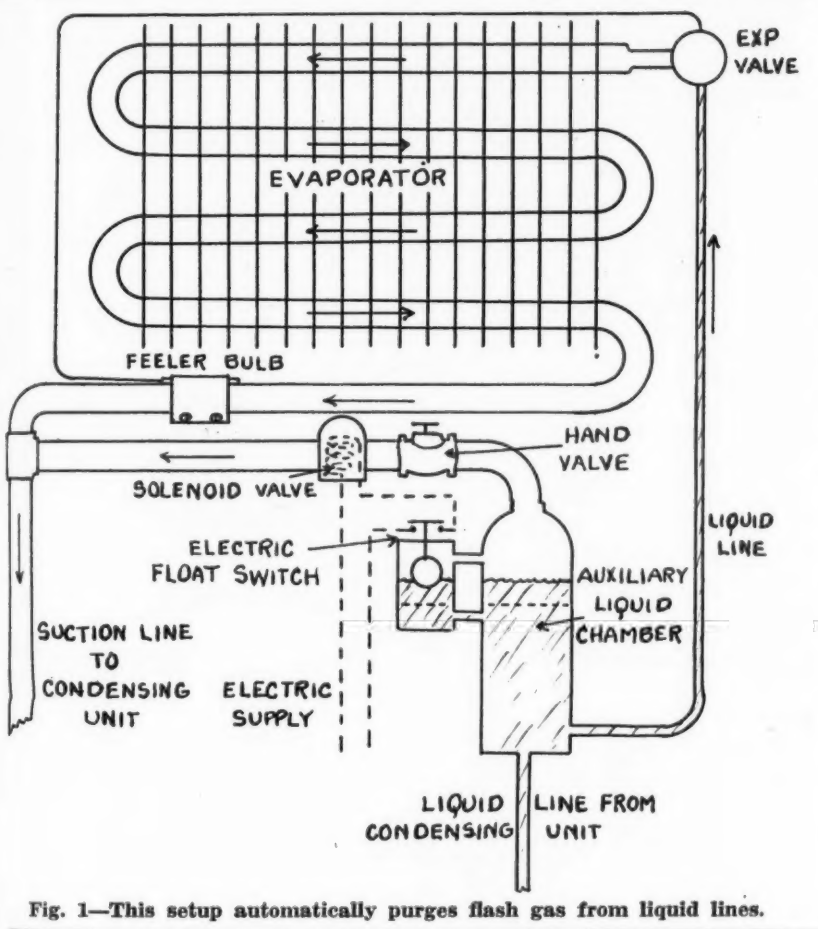


Fig. 1—This setup automatically purges flash gas from liquid lines.

VIRGINIA
Refrigerants

TESTED PURITY for SERVICE SURETY

"EXTRA DRY ESOTOO", "V-METH-L" AND METHYLENE CHLORIDE

AGENTS FOR KINETIC'S "FREON-12"—AND "FREON-22"

VIRGINIA SMELTING CO.

WEST NORFOLK, VIRGINIA

72 Beaver St., New York 5 131 State St., Boston 6

Water gives LIFE to the goldfish but it's DEATH on sliding parts

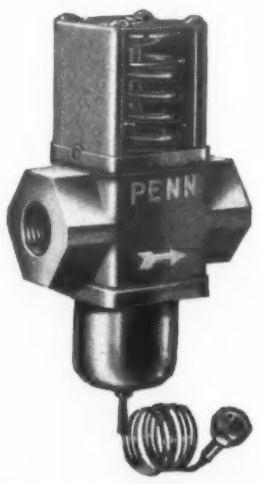
WATER regulators just don't "take to water." For water means rust and corrosion. Worse, the deposits made by water are of a particularly abrasive nature . . . they're *death on sliding parts.*

That's why PENN designed the new Series 246 Water Regulator so that *no sliding parts are in contact with water.*

Thus PENN has eliminated the most common source of water valve trouble. There is no sticking of seats, no rusting of range springs, no corrosion and sedimentation on sliding parts. What's more, the PENN 246 *puts a stop to water hammer* . . . yet the valve is extremely sensitive to head pressure changes.

A free copy of Bulletin R-1986, giving full particulars on this new valve, is waiting for you. Ask for it today! *Penn Electric Switch Co., Goshen, Ind.* Export Division: 13 East 40th Street, New York 16, U.S.A. In Canada: Powerlite Devices, Ltd., Toronto, Ont.

- No water hammer
- No sticking of seats
- No rust or sedimentation on sliding parts
- Valve can be flushed manually
- No drain plug — yet freezeproof
- Two styles — flanged & threaded

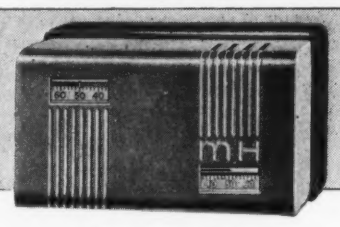


PENN

AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

THE SYMBOL OF Modern REFRIGERATION CONTROL



MODERNIZE YOUR REFRIGERATION SYSTEM
WITH "MH" Heavy Duty FRIGISTAT
MINNEAPOLIS-HONEYWELL REGULATOR CO.

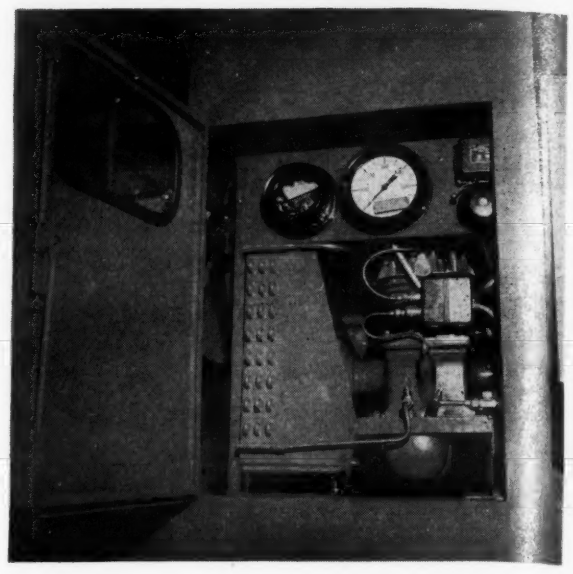
Commercial and Domestic
REFRIGERATOR HARDWARE
NATIONAL LOCK COMPANY
ROCKFORD, ILLINOIS

Your refrigeration parts and supply house in Central New York and Northern Pennsylvania

TED GLOU
CENTRAL SERVICE SUPPLY CO.
516-18-20 Erie Blvd. E., Syracuse, N. Y. Phone 5-4000
209 Jefferson Ave., Scranton, Pa. Phone 3-4000

Rapid Heat Transfer, But Definitely, Now Squelches Airport Crash Fires

1-Hp. Unit Keeps CO_2 Under Control For Fire Fighting



Heart of the new Cardox airport fire truck is this 1-hp. Brunner condensing unit, which is employed to keep three tons of CO_2 under proper pressure. In operation, this unit cuts in at 300 lbs. pressure and cuts out at 290 lbs., keeping the CO_2 at about 0° F. when the truck is not in use.

CHICAGO — Invented, produced, and sold throughout the world to combat heat, mechanical refrigeration equipment has recently been adapted to fight the most dangerous form of heat—fire—specifically, airplane crash fires.

In the new Class 150 airport fire truck manufactured by Cardox Corp. here, which extinguishes airplane crash fires in a remarkably short time by overwhelming the blaze with carbon dioxide, a 1-hp. Brunner condensing unit keeps tons of carbon dioxide cooled to 0° F. and at the comparatively low pressure of 300 lbs. per sq. in.

TEST FIRES EXTINGUISHED IN A FEW SECONDS

Recently at important military airfields throughout the United States, specially invited groups of army and navy officers, government officials, and civilians have seen simulated airplane crash-fires, involving hundreds of gallons of gasoline, extinguished in as little as 20 seconds.

Not only has actual extinguishment been consumated in 20 seconds, but usually within one minute after extinguishment has begun the entire roaring inferno of hot metal and blazing gasoline had been safely cooled to a point below re-ignition temperature. Though information on extinguishment of actual crash fires naturally is not available at this time, it is likely that this development will represent a big step forward in the progress of safer flying.

To experienced fire fighters the significance of such performance lies in the fact that the extremely severe conditions imposed place fires of this kind among the toughest of all to fight successfully.

AIRPLANE FIRES TOUGHEST

In the first place, when an airplane crashes and burns, the fire is likely to be hot, large, and practically instantaneous. Flame sweeps with appalling suddenness over the plane, down onto the ground, then billows high into the air as aviation gasoline—possibly hundreds of gallons of it—pours from ruptured fuel tanks and ignites.

Secondly, the knocking down of heat and flame must be immediate, if plane personnel are to be saved.

The extinguishing equipment used at these demonstrations was the six-wheel drive Cardox airport fire truck that can speed at close to 50 miles per hour to the scene of a crash and release three tons of carbon dioxide, if necessary, onto the blazing plane in approximately one minute.

The fire truck uses this basically simple approach to the problem of airplane crash fires: A plane fire can be extinguished if you get there quickly enough with the right extinguishing medium, and apply it at a high enough rate and in quantity to cope with even very large fires. Primary objective must be the immediate knocking down of heat and flame so that trapped plane personnel can be rescued.

OUTSTANDING DEVELOPMENT

To accomplish this objective successfully the Cardox fire truck utilizes liquid carbon dioxide, maintained at the low temperature of 0° F. This carbon dioxide is discharged at an extremely high rate into the heart of the crash fire, so that the fire is "cooled out" quickly and completely. This high rate of application is one of the outstanding developments in the Cardox method of extinguishment.

As the liquid carbon dioxide is discharged from its controlled temperature and pressure into the air, it immediately becomes part CO_2 snow (dry ice particles) at —110° F., and part very cold CO_2 vapor. The gasoline and the fire zone are immediately flooded with a gas that crowds out the oxygen necessary for burning. Vapor and "snow" rob the fire of its necessary "heat of combustion." The extinguishing action is three-fold: oxygen concentration is reduced, burning vapors are diluted, and hot metals and combustible are cooled.

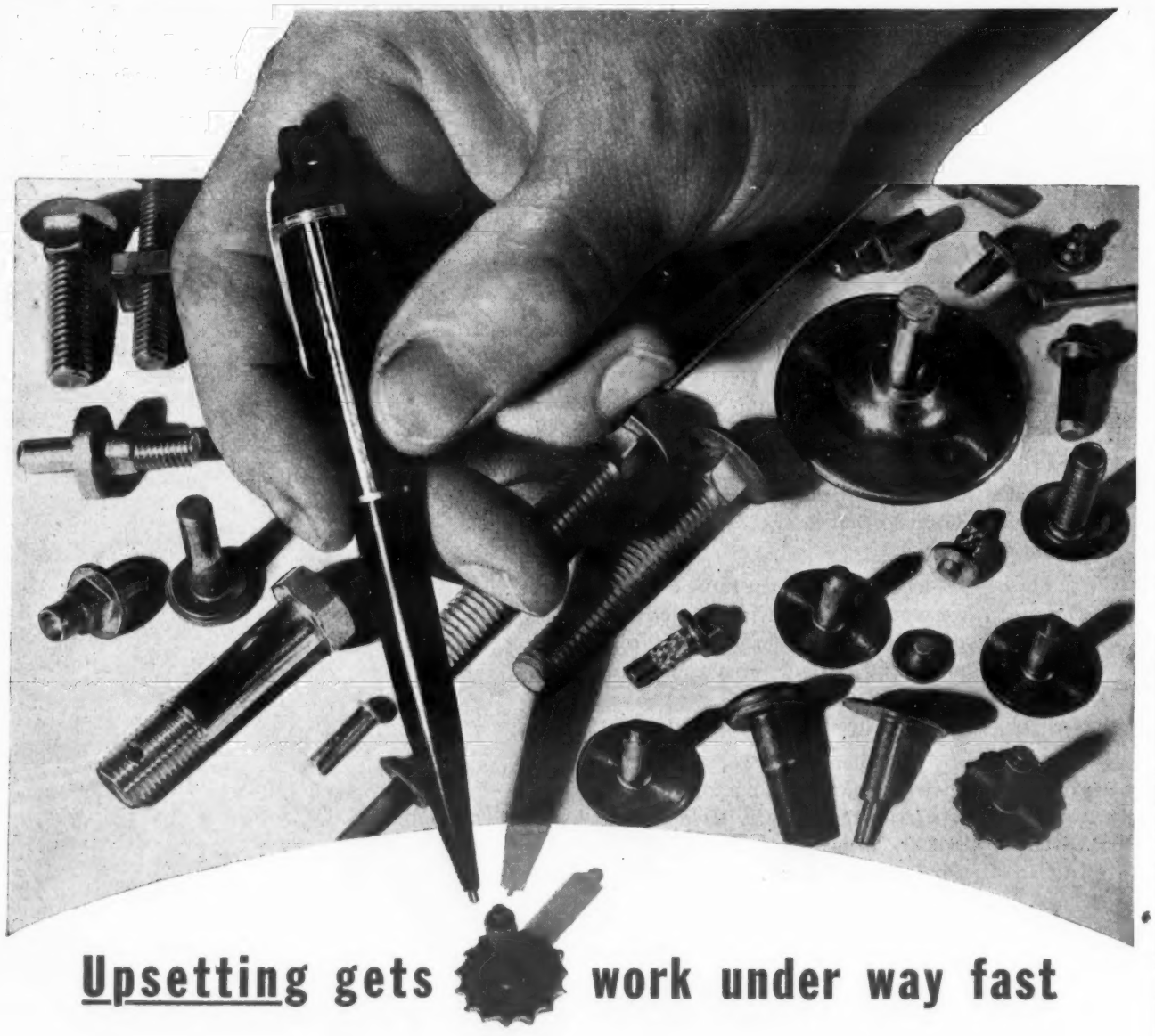
HOW SYSTEM OPERATES

The extinguishing medium used in the fire truck is low-pressure carbon dioxide. It is stored in a single, large, mechanically refrigerated, and insulated pressure vessel at a temperature of approximately 0° F. and the resulting, relatively low pressure of 300 lbs. per sq. in.

In the refrigeration system a 1 hp. Brunner unit is used, utilizing "Freon" as the refrigerant. When the truck is not in use electrical power for the motor is supplied by a drop cord which is plugged into the truck. Driving the truck away to the scene of the fire automatically disconnects the cord.

The refrigeration unit is entirely automatic in its operation, with the power supply to the motor controlled by a tank pressure switch. When the tank pressure rises to 300 lbs. per sq. in., this switch closes and starts the motor. When the carbon dioxide has been refrigerated to the extent that tank pressure is reduced to 290 lbs. per sq. in., the tank pressure switch opens and the compressor stops. Through temperature control, pressure is thus constantly maintained within the range of 290 to 300 lbs.

(Concluded on Page 23, Column 1)



Upsetting gets work under way fast

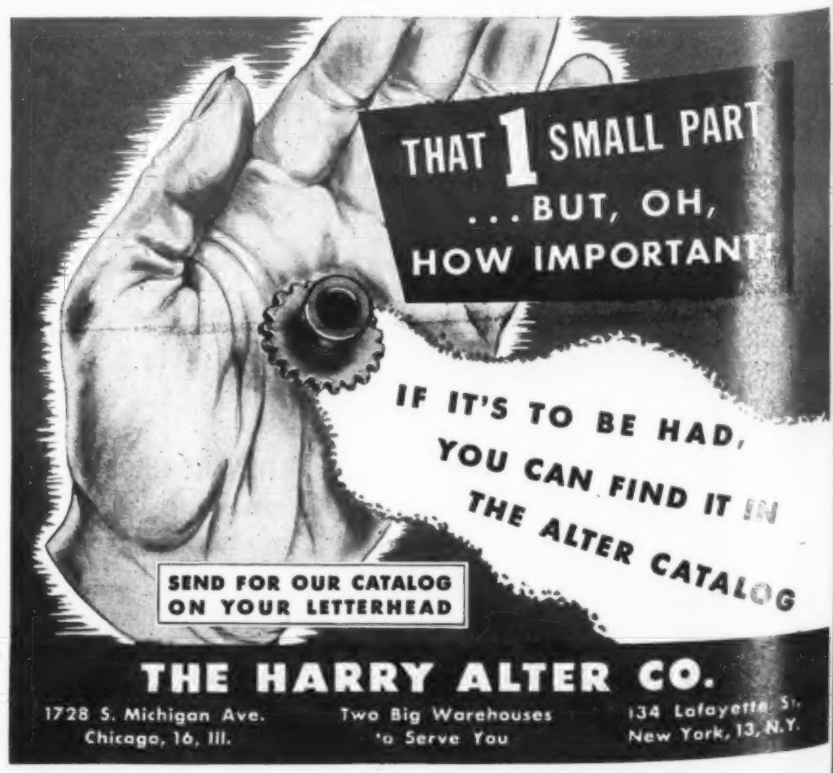
In two quick steps, this little part is made. The head and the shank with projection are upset from Alcoa Aluminum wire in a rivet header. A blanking operation shapes the head, and the part is ready for heat treating.

Dimensions can be closely controlled in these heading and blanking operations. Parts, like the carriage bolts you see in the photograph, can be produced with well filled-out square shoulders without the need of expensive milling operations.

Where design and quantities warrant production by upsetting, this process develops sizable economies. In addition to being fast, it saves raw material. You use all the metal you start with, obtaining final shapes by upsetting.

Alcoa is equipped to supply you with aluminum parts produced either on rivet headers, on automatic screw machines or a combination of both. Recommendations are based, therefore, on the most economical method. ALUMINUM COMPANY OF AMERICA, 1975 Gulf Bldg., Pittsburgh 19, Pennsylvania.

ALCOA ALUMINUM


THAT 1 SMALL PART
...BUT, OH, HOW IMPORTANT!
IF IT'S TO BE HAD, YOU CAN FIND IT IN THE ALTER CATALOG
SEND FOR OUR CATALOG ON YOUR LETTERHEAD
THE HARRY ALTER CO.
1728 S. Michigan Ave. Chicago, 16, Ill.
Two Big Warehouses to Serve You
134 Lafayette St. New York, 13, N.Y.

Quick Cooling Will Help Save Lives In Airplane Fires

(Concluded from Page 22, Column 5)

The front nozzle, mounted just ahead of the truck radiator, and a linear ground-sweep nozzle—each with a capacity of 1,250 lbs. of carbon dioxide per minute—are discharged directly into the heart of the fire. Shielded behind this cooling screen of inert carbon dioxide, the truck can safely approach close to the fire.

Released at the rate of approximately 2,500 lbs. per minute from the 10-ft. long boom nozzle mounted on the cab of the truck, carbon dioxide vapor and "snow" knock down heat and flame and engulf the fire zone. By controls on the instrument panel within the cab, the boom and front nozzles are moved up or down, to right or left, for most effective application of the mass discharge of carbon dioxide. Discharge of both these nozzles, as well as the linear nozzle, is also controlled from within the cab.

TWO HOSE LINES PERMIT FLEXIBILITY OF APPLICATION

Two hose lines, each 100 ft. long, with 1½-inch nozzles of 750 pounds of carbon dioxide per minute capacity, are brought into action to give extreme flexibility of application, as well as to apply the maximum amount of carbon dioxide in the shortest period of time. Two ⅝-inch hose lines fitted with bayonet type nozzles may also be used to pierce and flood plane compartments with carbon dioxide, and so reduce the possibility of explosion and spread of the burning area.

Carbon dioxide is a fast acting, non-damaging fire extinguishing medium. In the Cardox fire truck it is given further enhanced fire extinguishing performance through control and engineered application.

For example, with 3 tons of liquid carbon dioxide, capacity for extinguishment of large fires can be provided in mobile equipment, and, through specially designed nozzles, an extremely high rate of application achieved.

Equally important, methods in control and engineered application utilized give this low temperature, low-pressure carbon dioxide enhanced fire extinguishing values:

(1) Extinguishing characteristics are uniform, regardless of atmospheric temperature. This is of particular importance in the case of airport fire trucks which may be called upon at any time for peak performance under all weather conditions, ranging from very cold to extremely hot.

(2) Cooling effect of the carbon dioxide discharge is augmented because of the high yield of CO_2 snow realized. This snow results from the sudden release to atmosphere of stored carbon dioxide. It has a temperature of minus 110° F. Carbon dioxide released at 0° F. yields 45% CO_2 snow, as contrasted with 21% at 86° F.

OPERATOR HAS BETTER AIM WITH HEAVY CO_2 'SNOW'

(3) More effective projection and relatively great "reach," even in strong winds, is achieved because of the high yield of comparatively heavy CO_2 snow. (Just as a handful of buckshot can be more accurately thrown for greater distances than a handful of feathers.) This means, for example, that the boom nozzle on the fire truck has an effective range of approximately 50 ft. Discharge from other nozzles can likewise be directed as required into the heart of the fire

In Less Than a Minute Fires Like This One Are Extinguished by New Type Fire Truck

With carbon dioxide spurting from four nozzles at a rate as high as three tons a minute, the Cardox fire truck has put out simulated airplane crash fires, such as the above, in as little as 20 seconds. Within a minute, temperatures have been pulled down below the re-ignition point.

Wiring Group Assists In Consumer Education

NEW YORK CITY—To assist electrical industry groups in their education of the consumer on the practical aspects of electrical operation in the postwar home, the National Adequate Wiring Bureau has prepared a new set of lecture charts and a 16-page booklet, both entitled "Electrical Guide to Your Postwar Home," announces Herbert Metz, chairman of the bureau's executive committee.

Charts and booklet show that any home, in any size or price bracket, depends either wholly or partially upon electricity for these eight necessary functions: illumination; cleaning and sanitation; meal preparation and food storage; heating, ventilating, and air conditioning; entertaining and hospitality; education, recreation, and hobbies; health protection and personal care; utility, safety, and protection.

Suggested script of detailed stage directions accompanies the set of charts. The booklet is designed for distribution at group meetings in conjunction with the chart lecture.

Electromaster Appoints 5 New Distributors

DETROIT—Five new distributors have just been named by Electromaster, Inc., manufacturer in peacetime of electric ranges and water heaters, as part of a postwar expansion policy, reports Gerald Hulett, vice president.

The new distributors are D. W. May Corp., New York City; Luckenbach & Johnson, Inc., Allentown, Pa.; Electric Supply Co., Atlanta, Ga.; Air Engineers, Inc., Birmingham, Ala.; and Automatic Home Equipment Co., Chattanooga, Tenn.

Arthur Fields Named Crosley Distributor

CINCINNATI — The Arthur L. Fields Chevrolet Co. of Portland, Ore., has been appointed a distributor for the Crosley Corp.

For 27 years, Arthur L. Fields has been head of this company, which has been operated as a partnership. The company's office is located at 107 S. E. Grand Ave. in Portland.

Redmond MICROMOTORS

TAILORED TO YOUR REQUIREMENTS

CAST ASIDE old ideas on motors of a twentieth horsepower and less! The new Type "T" shaded pole Micromotors introduce a brand new conception of small motor engineering.

Here's tailor made performance to match your requirements. New compactness. New simplicity. New perfection in every part and step of assembly.

These new Micromotors are alive with features designed to put new life in your products.

You should know about the patented Flush-Weld rotors, Air-Stream enclosed cooling, Pressure-Locked resilient rubber mountings that have no nuts or bolts to work loose, and the new highly developed machining processes that assure the same fine construction in every Type "T" Micromotor on a mass production basis.

Write today and get all the details. Ask about the Type "T" Micromotors.

A. G. Redmond Company

REDMOND

Composite sketch of Redmond facilities with over 5 acres of floor area.

OWOSSO, MICHIGAN, U. S. A.

MANHATTAN PV-BELTS

MORE POWER
Grips the grooves . . . stops slip—flexible construction for uniform "pull"

LONGER WEAR
Endless cord construction resists internal heat and side wear.

SILENT RUNNING
Smooth running and noiseless on high-speed drives.

THE MANHATTAN RUBBER MFG. DIVISION of Raybestos-Manhattan, Inc.
Townsend Street Passaic, New Jersey

Servicing the G-E Refrigerator Line

Replacement Procedure

Capacitor Replacement

CE AND CF MACHINES

1. Remove mounting screws holding capacitor to fan housing or motor-compressor assembly.
2. Pull out capacitor.
3. Take off removable end cap and disconnect capacitor leads.
4. Connect leads to replacement capacitor. Refer to proper wiring diagram, Fig. 64.
5. Replace end cap and remount capacitor. Make sure rubber end cap completely insulates capacitor so that it is not grounded to machine.

CK-30 and CK-35 MACHINES

1. Lift machine out of cabinet far enough to expose capacitor pocket under right side of cabinet top.
2. Break paper seal over pocket.
3. Disconnect leads and remove capacitor.
4. Install new capacitor with filling plug between terminals toward top of machine.
5. Connect leads. Refer to proper wiring diagram, Fig. 64.

DR MACHINES

1. Disconnect capacitor leads from control and attach a long piece of cord to them.
2. Remove capacitor mounting screws.
3. Lift off capacitor and pull leads through cabinet top with cord attached.
4. Attach cord to leads of replacement capacitor and pull leads through cabinet top to control.
5. Install capacitor mounting screws and connect leads to control.
6. Refer to proper wiring diagram, Fig. 66.

CB, CD, and CM MACHINES

1. Capacitor can be replaced separately if capicitor leads are connected to terminal block on motor, or if round-type capacitor has removable end cap.

If capacitor leads are connected inside of motor, combined motor and capacitor assembly must be replaced.

2. Disconnect capacitor leads from motor terminal block or from removable end cap of capacitor.
3. Remove capacitor mounting screws and lift off capacitor.
4. Install replacement capacitor and replace mounting screws.
5. Connect leads. Refer to proper wiring diagram, Figs. 75 and 76.

Oil Conditioner Testing and Replacement

TESTING

There are three ways to test an oil conditioner.

1. Use a 25-watt lamp with suitable plugs connected in series between machine and electric service outlet. Lamp should glow with about half brillancy when control is switched off. Lamp will not light if oil conditioner is open circuited. If short circuited, lamp will light with normal brilliancy.
2. Disconnect one of oil conditioner leads and "spark" to its terminal. No spark indicates an open circuit, and an unusually large spark, a short circuited conditioner.
3. Remove oil conditioner. See below. If conditioner is hotter than hand can stand, it is in satisfactory condition. If not hot, it is inoperative.

REPLACEMENT

1. Remove oil conditioner cover from motor-compressor base.

Cover is rubber plug in rear of CA machines.

Cover is nameplate on front of DR machines.

There may or may not be an additional rubber plug under nameplate.

2. Fish around inside box top with hooked wire or duckbill pliers for green leads to oil conditioner.
3. Pull out these leads and oil conditioner.

Do not touch oil conditioner or rest it on finish if it is hot.

4. Cut off leads at taped joint or about six inches above heater.
5. Solder leads to replacement conditioner.

How to Locate Capacitor in G-E Units

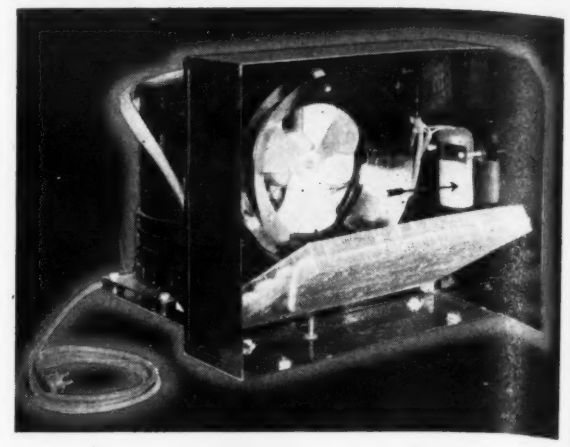


Fig. 49—Location of capacitor on CE machines is indicated by arrow.

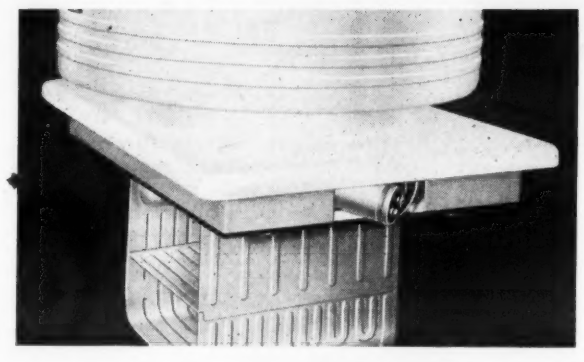


Fig. 50—On CK machine, capacitor is located in special pocket, as shown in center of picture at left.

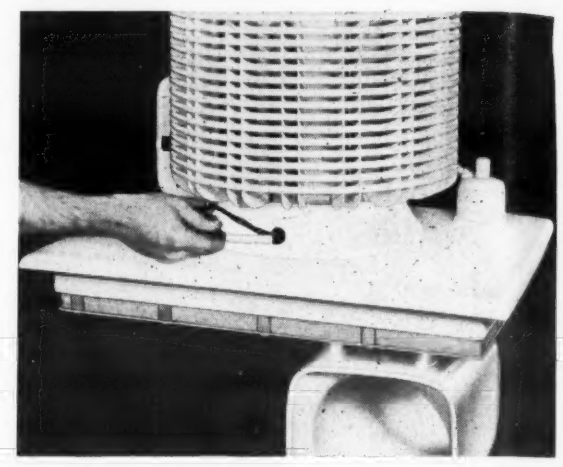


Fig. 51—Oil conditioner must be pulled out of machine unit for replacement.

Designers and Manufacturers of Thermostatic Expansion Valves; Pressure Regulating Valves; Solenoid Valves; Float Valves

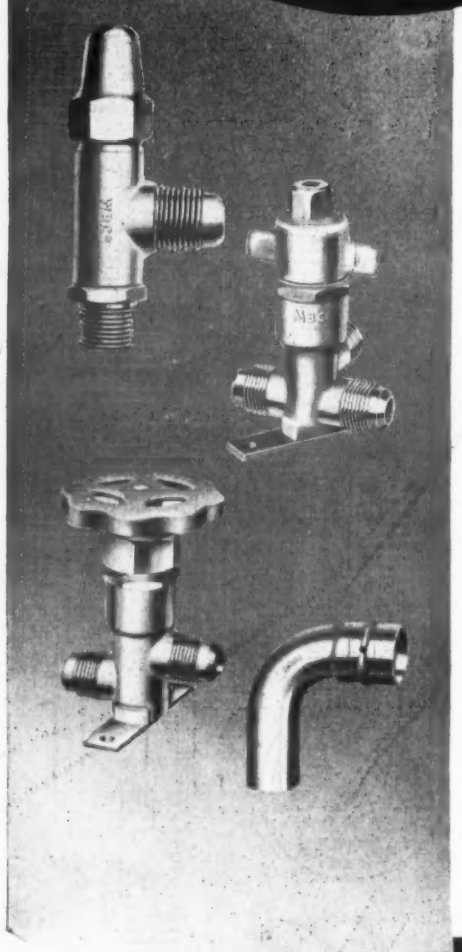
ALCO VALVE COMPANY • ST. LOUIS, MO.

MUELLER BRASS CO. PORT HURON, MICH.

ORDER FROM YOUR JOBBER

MADE IN U.S.A.

YOUR JOBBER IS YOUR BUSINESS FRIEND



Our policy for many years has been to distribute our goods on a selective jobber plan. Our experience has shown us that this policy is a sound one. It achieves for us a nation-wide distribution at the lowest possible cost. This lower cost naturally benefits not only us but also the jobber, service man and contractor.

The jobber has a distinct and important service to perform in the distribution of goods. We believe that through the services he renders, the goods actually reach the ultimate buyer at a lower cost rather than a higher one, and that selling goods direct does not reduce the cost to the eventual consumer. As manufacturers we know that if we sold direct, we would require billing, accounting and shipping forces ten to twenty times greater than what we have at present. Our transportation charges would increase tremendously; our storage space would have to be greatly enlarged. These things and many more would necessarily reflect themselves in the cost of the product.

Our post-war distribution policy will be on the same basis as it has been for many years prior to the war—distributed on a selective jobber plan. We will sell only enough jobbers in a locality to assure complete coverage of territory and trade. All trade inquiries will be referred to the jobber.

We will carry a complete line and assume undivided responsibility for—line valves, compressor valves, receiver valves, driers, heat exchanger, liquid indicators, fittings, both flare and solder type, hard drawn solder sealed copper pipe, dehydrated tubing.

MUELLER BRASS CO.
PORT HURON, MICHIGAN

DAVISON'S SILICA GEL SETS THE STANDARD FOR DRYING AGENT PERFORMANCE--No. 4

PROCESSED ESPECIALLY FOR THE DEHYDRATION OF REFRIGERANTS

ITS *Maximum Capacity* FOR MOISTURE IS UNAFFECTED BY OIL

Because a large proportion of troubles and service difficulties are due to the presence of moisture in the system, it follows that complete removal of moisture will eliminate . . . freeze-ups, corrosion, oil deterioration, copper plating and oil sludging.

You will find that Davison's Silica Gel has 1½ to 2 times as much capacity as other types of drying agents . . . gives you more value per pound in time saved on the job and in reduction of "make-good" service calls.

In addition—Davison's Silica Gel removes acids that cause corrosion; it acts instantly; it will not attack metals or alloys; it will not cake nor powder. Effective on Freon, Methyl Chloride, Sulphur Dioxide, etc.

Your regular jobber stocks Davison's Silica Gel—in factory-charged dehydrators and for refilling.

THE DAVISON CHEMICAL CORPORATION
Progress through Chemistry
BALTIMORE-3, MD.

Canadian exclusive sales agents for DAVISON'S SILICA GEL:
CANADIAN INDUSTRIES LIMITED, General Chemicals Division

Text of Order Regulating Sale & Use of Commercial Electric Motors

PART 1226—GENERAL INDUSTRIAL EQUIPMENT

[Limitation Order L-341]

COMMERCIAL TYPE ELECTRIC MOTORS

The fulfillment of requirements for the defense of the United States has created a shortage in the supply of electric motors for defense, for private account, and for export; and the following order is deemed necessary and appropriate in the public interest and to promote the national defense.

§ 1226.140 **Limitation Order L-341—(a) Purpose and scope.** This order applies only to the following kinds of new electric motors (not including electric generators, but including such motors furnished in motor-generator sets):

(1) Fractional horsepower AC motors of all sizes and types, including universal (AC-DC) motors, except specially designed airborne and shock proof shipboard types; and

(2) Single phase AC motors in sizes one to five horsepower, inclusive, except specially designed airborne and shock proof shipboard types.

Motors of the kinds described above are referred to in this order as "commercial motors." Persons who wish to get more than certain quantities of commercial motors in any calendar quarter from all sources for any purpose except resale as such, must file an application with the War Production Board. Unless the Board takes some action upon the application by notice in writing to the applicant, he may continue to receive all motors which he has ordered and may continue to place his orders in advance, to the extent permitted by other orders and regulations of the Board.

This order also requires commercial motors obtained with ratings assigned on Form WPB-547 to be distributed after Aug. 15, 1944, only for replacement purposes or for use by farmers.

(Additional rules concerning deliveries and receipts of these and other types and sizes of motors are contained in Limitation Order L-123 relating the fractional motors, Limitation Order L-221 relating to integral motors, and General Scheduling Order M-293).

(b) **Applications required for receipt of over 450 fractionals or 75 integrals per quarter.** Every person who has ordered or hereafter orders, for delivery from all of his suppliers during any one calendar quarter, a total of more than four fundred and fifty (450) fractional horsepower AC motors, or more than seventy-five (75) single phase AC motors in sizes one to five horsepower, must file application with the War Production Board if such motors are to be used for any one or more of the following purposes:

(1) For his own installation and use; or

(2) For incorporation into other products which he makes; or

(3) For sale as a driving unit or accessory for other products which he makes or purchases (even though the motors are not actually incorporated into such other products by him). A person who receives motors for this purpose, and also for distribution separately as such, need not file the application for those which he will distribute separately. If he is unable to know what number he will distribute separately, he must assume that the number he will sell as a driving unit or accessory will be equal to the number of items of such other products which he has ordered for delivery to him without motors, or plans to produce, during the same period. (If he has ordered less motors than the number of items of such other products which he will receive without motors or make during the same period, he must consider the entire quantity of motors as being ordered for sale as a driving unit or accessory.)

Use Form WPB-3825. Application must be made by the purchaser on Form WPB-3825, prepared in accordance with the instructions for that form. The applications must be filed on or before the 10th day of September, 1944, the 10th day of December, 1944, and so on quarterly. Each application must show all unfilled orders (whether previously reported or not).

Application required in addition to ratings. Any person who now or at any future time has outstanding unfilled orders for such motors for delivery during any immediate or future calendar quarter in quantities in excess of those stated above, is forbidden to receive any of them after Sept. 10, 1944, even though he has a preference rating for them or has been authorized to receive them under some other order, regulation, or certificate of the War Production Board, if he does not file the application on or before the dates indicated. However, if he reduces, postpones, or cancels his orders to the extent necessary to bring all of his requested deliveries during each calendar quarter within the quantities specified above, and does not receive deliveries from his suppliers in excess of those quantities, he need not file the application.

This order applies also to intra-company receipts. The application must be filed to permit receipts by one department (a branch, division, or section) of a single organization from another department of the same organization when the motors are to be used by the department receiving them for any of the three purposes stated above, if that department's receipts in any quarter are to exceed the quantities indicated.

If requirements increase after filing dates. If any person who has not requested delivery of more than the quantities stated above during any calendar quarter, at the time required for filing, should after that time increase the quantities requested in any quarter to an amount in excess of that stated above, he must file the application immediately and may not receive delivery of any of the increased amount until at least fifteen days after he has filed.

Restrictions on suppliers. If any motor supplier knows or has reason to believe that any customer of his who should file an application under this order has not done so, he may not make any deliveries of such motors to such purchaser. If he knows or has reason to believe that a customer of his has been directed by the War Production Board to reduce, postpone, or cancel his orders, by a direction issued pursuant to (d) below, and that the customer has not done so, he may not deliver commercial motors to the customer in excess of the quantities authorized by the direction. The War Production Board will notify the supplier when such a direction is issued to a customer of his.

Persons who supply motors, as such, do not file. This order does not apply to receipts of motors by a distributor or other supplier of motors which are intended to be and are resold as such by him (and are not to be utilized by him for any of the purposes stated in (1), (2), or (3) above). It does apply, however, to any person who receives motors from a motor supplier for any of the purposes stated.

(c) **Receipt of motors by a purchaser who has filed the application.** Unless otherwise notified by the War Production Board by action on his application, a purchaser who has filed his application may receive motors during the calendar quarter following his application, and may place orders or leave in effect orders previously placed for delivery of motors in future quarters, subject to any other applicable order, regulation, or certificate of the War Production Board.

(d) **Individual directions.** The War Production Board may issue directions to any such purchaser requiring him to reduce, postpone, or cancel his unfilled orders for delivery of such motors when it finds (1) that the deliveries which he has requested appear to be in excess of the minimum practicable amounts required to fulfill his authorized production schedules or in excess of the practicable minimum working inventory reasonably necessary to meet deliveries of the products which he produces or distributes, or (2) that some adjustment in receipts is necessary in order to distribute the available production of such motors equitably between him and other purchasers or assure the fulfillment of War Production Board programs.

If it is found that the aggregate of shipments requested are continuing in excess of the aggregate production, it will be the policy of the Board to require reductions in receipts of such motors to such extent as may be necessary to bring requested shipments and production in balance. As the motors covered by this order are more or less standardized types, the factors referred to in Interpretation 7 of Priorities Regulation 1 (Minimum Sale Quantities and Production Runs) will normally not be considered as justifying receipts in excess of the purchaser's minimum requirements.

(e) **Commercial motors distributed by WPB-547 ratings to be sold and used only for replacement purposes or for use by a farmer.** (1) Any distributor who gets, or has gotten, any commercial motors with ratings assigned on Form WPB-547 (formerly PD-1X) must not deliver any of them after Aug. 15, 1944, unless he has marked each one, before delivering it with a stamp or durable tag firmly attached to it and containing substantially the following statement in easily readable lettering:

This motor allocated by WPB and to be sold and used only as a replacement, or for use by a farmer. See WPB Order L-341.

After Aug. 15, 1944, no distributor may deliver any commercial motors obtained with a WPB-547 rating if he knows or has reason to believe that the motors will be resold or used for any purpose except for replacement purposes, or for use by a farmer.

"Farmer" has the same meaning in this order as in Priorities Regulation 19.

(For the rules as to deliveries of fractional horsepower commercial motors to farmers, see Priorities Regulation 19 and Order 1-123; as to integral horsepower commercial motors, see Order L-221.)

(2) Any dealer, repair shop, ultimate consumer or other person who receives a commercial motor identified with the marking required under (e) (1) above, or which he knows or has reason to believe should be so marked, must not knowingly deliver, install, or use it except to replace a worn out or defective motor, or for use by a farmer. The marking shall not be removed, until the motor is installed.

(f) **Miscellaneous provisions—(a) Applicability of regulations.** This order and all transactions affected thereby are subject to all applicable regulations of the War Production Board, as amended from time to time.

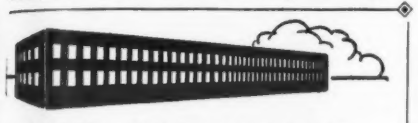
(2) **Violations.** Any person who wilfully violates any provision of this order or who, in connection with this order, wilfully conceals a material fact or furnishes false information to any department or agency of the United States, is guilty of a crime, and upon conviction, may be punished by fine or imprisonment or both. In addition any such person may be prohibited from making or obtaining further deliveries of, or from processing or using material under priority control, and may be deprived of priorities assistance.

(3) **Appeals.** Any appeal from the provisions of this order shall be made by filing a letter in triplicate referring to the particular provision appealed from and stating fully the grounds of the appeal.

(4) **Communciations.** All reports required to be filed hereunder and all communications concerning this order shall, unless otherwise directed, be addressed to: General Industrial Equipment Division, War Production Board, Washington 25, D. C., Ref.: L-341.

Issued this 31st day of July, 1944.

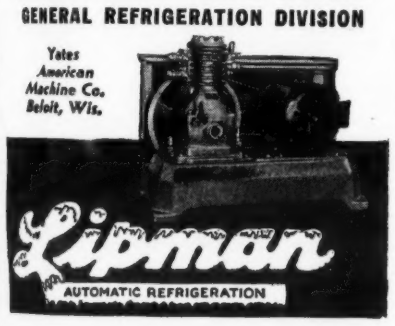
War Production Board,
By J. Joseph Whelan,
Recording Secretary.



WAR INDUSTRIES NEED REFRIGERATION

The use of refrigeration in industry has been greatly accelerated by the war. In peacetime this expansion may logically be expected to continue. Write for literature.

GENERAL REFRIGERATION DIVISION



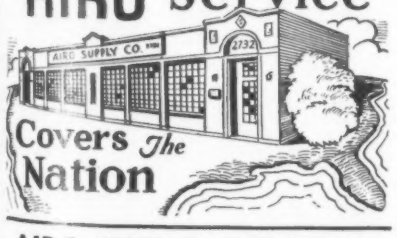
THEY "LIKE TO BUY FROM AIRO SUPPLY—"

By fast express—parcel post—first-class mail—by truck, train, and airplane—AIRO Supply Company serves refrigeration shops in every state in the union. Speedy service, plus AIRO's reputation for having what's wanted, is making us the parts, tools, and equipment headquarters for service companies from coast to coast. . . . "You'll like to buy from AIRO Supply"—

Send for VICTORY Catalog (Use your letterhead, please)

BECAUSE

AIRO Service



AIRO SUPPLY COMPANY
WHOLESALE ONLY
Refrigeration Parts, Equipment & Supplies
Dept. B, 2732 N. Ashland Ave., Chicago 14, Ill.

Embossed and Figured
BREAKER STRIPS!
ONE of the novelties that will attract the feminine buyer of refrigerators will be embossed, figured and colored breaker strips and door backs.
Almost anything that can be engraved on a metal plate can be reproduced in the surface of Formica. And the material itself can be figured in crystalline shapes in color.
This opens up a wide field for the designer to build more attractiveness and sales appeal into his after-the-war box.
The material is remarkable too, in the amount of cleaning and scrubbing it will stand without the slightest injury to the surface or the color.
Let our engineers tell you the story.
FORMICA
THE FORMICA INSULATION CO.
4610 Spring Grove Ave.
CINCINNATI 32, OHIO.

HOWELL MOTORS

ELECTRIC MOTORS FOR INDUSTRY SINCE 1915

HOWELL ELECTRIC MOTORS COMPANY · HOWELL, MICH. · REPRESENTATIVES IN ALL PRINCIPAL CITIES

Inside Dope

By George F. Taubeneck

(Concluded from Page 1, Column 1)

raises, yet prices won't reflect those raises until some time after the election—so the unthinking will not realize what has happened to them.

In return for an eight million dollar campaign fund to re-elect FDR for a Fourth Term, the CIO would be paid off by at least 100 million dollars in wage increases—practically all of which will come out of the taxes we are all digging so deeply to pay.

Clever politics? Perhaps too clever.

As for us, we're looking for some of that 8-to-5 money while it's still available.

Food Prices Sure To Come Down

Food surpluses, of which this column has been warning for more than six months, are now reaching alarming proportions.

There appears to be no force on this green earth which can prevent some disastrous marketing experiences for thousands of food producers. Take beef, for instance. Presently the cattle population of the nation is more than 83,000,000—by far an all-time record.

Despite frantic efforts on the part of the War Food Administration to get all beef off the rationing list, consumption is still artificially discouraged. When war ends in Europe plenty of cattlemen are going to lose their shirts.

Harvests of other foods are not only record-breaking in this country, but they are extraordinary elsewhere. It has been commonly assumed that "starving Europe" would take our surplus food stocks off our hands. But Europe isn't starving. She may not need a fraction of the food earmarked for shipment there.

In all the world's history never has there been so large a surplus of food in storage. When war ends it will be a headache to everyone but the housewife—who seems almost sure to see low food prices again.

Sane Planning for Postwar Business

F. D. Newbury, Westinghouse vice president makes some of the sanest remarks on postwar planning. We quote:

"I believe the sensible way to approach postwar planning and forecasting is by familiar methods. Postwar planning is no new problem, it is no different, except in degree, from the long-term planning that successful business men are doing continuously.

"We are, it is true, facing a greater variety of new conditions that makes this planning just now more difficult; but a highly favorable fact is that everyone realizes that conditions following the war will be different.

"Each kind of product, each customer group, and each market area has its past history, its characteristics, its war experience, and its postwar prospects. As always, these should be studied by familiar and tested market research methods.

"Each operating division of our business has been encouraged to make its own estimates of business volume and employment by studies of individual products and markets. The company as a unit, acting through its headquarters Economic Research Committee, has made a consolidated estimate that has been based on past company trends and experience and correlated with other guesses regarding the postwar prospects of the Federal Reserve Index, steel production, electric power production, price levels, and other significant factors.

"The Economic Research Committee is charged with the important and difficult task of watching developments of these general economic factors and correlating this information with the company's prospects, and also to keep in close touch with the opinions and estimates of other groups of industrial and government economists.

"One factor that is very difficult to evaluate in the individual product approach is the effect of new products and new markets on company growth. This has always been an important factor in the electrical field, and the integrated company approach takes this into account in some fashion merely by extending past-growth trends.

"This over-all guess (it is well to repeat that it is only a guess) of postwar company sales is roughly 60% of the 1944 peak war billings; this may appear low, but it is also 175% of the maximum prewar production and billings the company has ever experienced.

"Different lines of product will, of course, have quite different postwar prospects. There is general agreement that consumer's durable goods, such as automobiles and electric refrigerators, will enjoy the most favorable situations. Consequently, there are many different postwar employment problems; and each kind of business has its separate problem.

"Consumers' durable goods industries will have a difficult problem in the reconversion of facilities for the manufacture of civilian goods, but once this has been accomplished these industries will be able to provide employment for all or more than those employed during the war.

An example in our own company experience is found in a plant for the manufacture of refrigerator cabinets, ranges, washing machines, and smaller home appliances. This plant employed an average number of 3,350 employes per month during 1939, and reached its maximum prewar employment in July, 1941 when 5,000 people were employed.

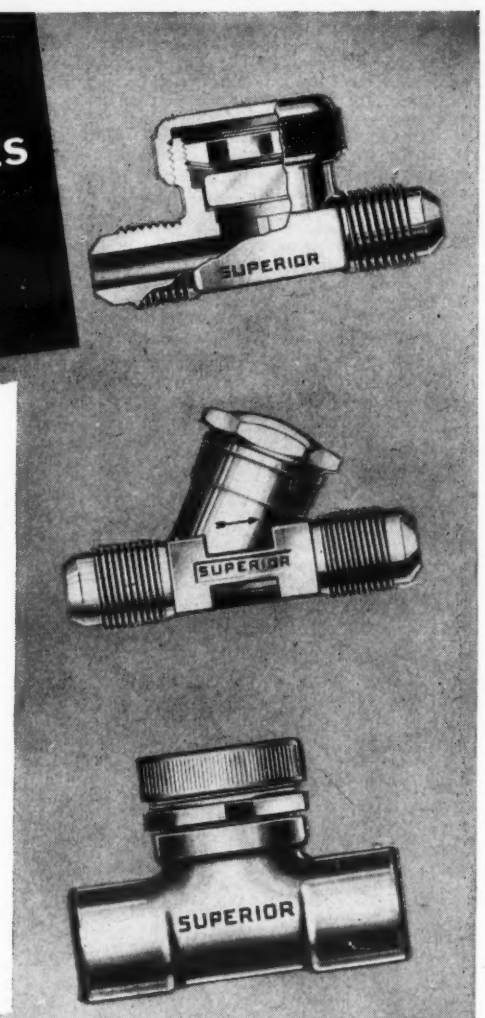
"The average monthly employment during the whole of 1941 was 4,500 employes. This average number dropped to 3,800 employes during 1942 because of the necessity for undertaking radically-different kinds of wartime products, such as radio equipment, binoculars, and aircraft frame parts for which new equipment and factory layouts had to be provided. Employment returned to an average of 4,400 per month during 1943.

"Postwar employment is expected to reach an average figure of 6,000 per month within a reasonable time following the beginning of unrestricted manufacture of home appliances.

"Much has been written about the necessity for full employment after

(Concluded on Page 27, Column 1)

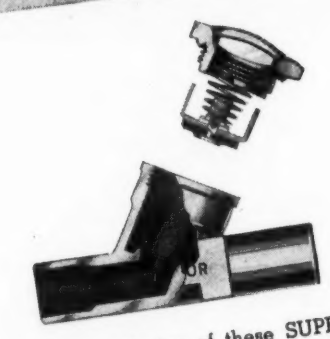
Superior "Non-Chattering" CHECK VALVES AND LIQUID INDICATORS



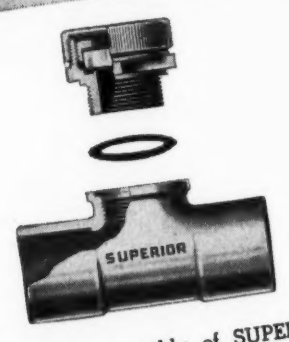
SUPERIOR CHECK VALVES—unique design, positive acting, spring-operated—cannot chatter, hum or buzz under any normal operating conditions. Pressure drop is negligible. Install one in the suction line of each low temperature circuit of all low temperature jobs—your assurance of maximum performance and trouble-free operation.

SUPERIOR LIQUID INDICATORS—call them liquid indicators, sight glasses, or refrigerant shortage detectors—one should be installed in the liquid line of each system. Seal cap over sight glass is double assurance against damage and leaks.

Note these exclusive features



The novel design of these SUPERIOR Check Valves permits the easy removal of all internal parts—**as a unit**—while soldering lines to valve connections, or for subsequent inspection.



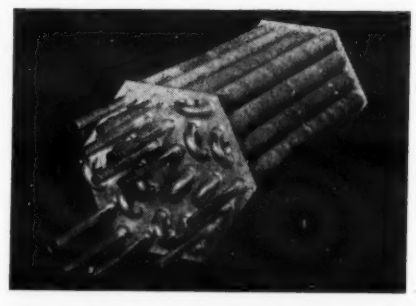
Entire upper assembly of SUPERIOR Liquid Indicators—in all sweat sizes—may be removed **as a unit** to preclude damage by heat while soldering lines to body connections.,

If you haven't a copy of Catalog R2, request one today

No. 96

SUPERIOR VALVE & FITTINGS COMPANY
PITTSBURGH 26, PENNSYLVANIA
OFFICES IN PRINCIPAL CITIES · WEST COAST STOCK: LOS ANGELES (15) · JOBBERS EVERYWHERE

ROME-CONDENSER
★ Jointless Type ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

ROME-TURNEY RADIATOR COMPANY
222 CANAL ST.
ROME, N. Y.

Tomorrows AIR-CONDITIONING AND REFRIGERATION EQUIPMENT *is being planned Today!*

Foresighted manufacturers are planning and designing air-conditioning equipment to sell in postwar markets. Many improvements and refinements will be incorporated. Dependable motor power must be given careful consideration, and Wagner engineers too are looking ahead and designing motors that will do an economical and dependable job on such new postwar equipment.

MOTORS
TRANSFORMERS
UNIT SUBSTATIONS
INDUSTRIAL BRAKES
BRAKE LINING

M44-12A

Consider
Wagner MOTORS
in your Postwar plans...

Wagner engineers are making a straight-from-the-shoulder offer to help you—to make your problem their problem—to assist you in every way possible to turn out exactly what should be the motor drive on your apparatus.

Wagner Type RA, repulsion-start-induction motor. Made in various speeds, frequencies, and voltages; rigid- or resilient-mounted; 1/8- to 15-hp.

If YOUR AIR-CONDITIONING OR REFRIGERATION EQUIPMENT *has gone to War...*

If the equipment you are now manufacturing is essential to war production plants, housing projects, or to the armed forces, Wagner will gladly figure with you on your requirements. Consult the nearest of Wagner's 29 branches, located in principal cities and manned by trained field engineers.

Write FOR BULLETINS

Bulletins MU-182 and MU-183 fully describe the comprehensive line of Wagner motors. Service Instruction Manuals MU-7B and MU-30B too will be of help.

Wagner Electric Corporation
ESTABLISHED 1891
6441 Plymouth Avenue, St. Louis 14, Mo., U. S. A.
ELECTRICAL AND AUTOMOTIVE PRODUCTS

Inside Dope

By George F. Taubeneck

(Concluded from Page 26, Column 5)

the war. However much industry and the public generally may desire to avoid the sufferings and losses of extreme unemployment, full employment, in the end, will depend on the confidence of the public and of industry in the immediate future and their consequent willingness to spend their money. There will be plenty of money to spend; what may be lacking is the willingness and confidence to spend.

"Modern industry is a highly-complex mechanism; jobs are made by the aggregate decisions of business men to expand facilities and by consumers to buy goods. We have never had prosperous times without both capital expenditures and consumer expenditures in large volume.

"Jobs are made in the long run by these private expenditures, and whether we have reasonably full employment after the war depends on the ability and willingness of people—as business men and as consumers—to buy.

"Government can do much to affect both of these requirements through wise tax policy and through encouragement of business enterprise, and management and labor can help by low production costs and a low price policy, but it is the people who, in the end, must provide the means for their own employment.

"There will be no question as to the ability of the public to buy. At the end of this year of 1944 the people of the United States will have, as savings of only three prior years, more than 70 billions of dollars of free funds.

"Business and industry, in spite of high taxes, will have surplus funds, providing those locked up in inventories and accounts receivable are promptly freed for use.

"The Department of Commerce has attempted to estimate the immediate postwar requirements of business and to compare total needs with the resources available. Tax accruals, reconversion costs, funds to finance peace time inventories, and other working capital requirements are estimated at 36 billions.

"The Department figures that industry and business will have resources to meet this requirements in these forms: 35 billions in cash and government bonds, settlement of contract claims on contract termination 9 to 14 billions, and depreciation and other reserves of 5 billions.

"The total investment of the Government in war plants is 15½ billions. This is equal to the depreciated value of all prewar, privately owned plants in the country, and this fact has led to alarm as to the consequences if Government should be led by choice or circumstances to undertake Government operation of these plants after the war.

"An examination of the nature of these Government owned plants allays some of this concern. I am of the opinion that the final effect of war construction on the country's peace time manufacturing facilities will be much smaller than many believe.

"To begin with, 30% of the total investment is for strictly military products, such as guns, ammunition, explosives, and shell-loading, which cannot readily be used for peace-time products.

"Forty-one per cent of the investment is in three greatly over-expanded industries, aircraft, ships, and non-ferrous metals.

Seventeen per cent of the total is represented by iron and steel, chemicals, and petroleum and coal. These specialized plants can be used only in these industries.

"This leaves only 12% or about 1.8 billions in the general manufacturing field.

"In this connection it is pertinent to point out that reduction in multiple shift operation—from, say, 225% of first-shift employment to 150% of first shift employment, and reduction of hours per shift from 48 to 40, would require all of the facilities now in use, and 83% of those employed for 55% of present production according to the simple arithmetical ratios involved.

"The public is beginning to realize that the same automobiles, refrigerators, and homes that were being produced in 1940 and 1941 would cost 20% to 30% more if they were being manufactured today, and will cost as much or more when we get around to peace time business again. This is the inevitable result of higher labor rates, which affect not only the producer's labor cost, but also the cost of his materials, which, after all, are made up largely of labor.

"There is no prospect that labor rates per hour will go down; the pressure will be for still higher rates, particularly as working hours per week and overtime payments decline. The only chance for lower labor costs in postwar products is that the amount of labor—the man-hours—can be reduced by more resourceful management, better equipment, and, if possible, greater effort and efficiency on the part of labor.

"There is an extremely important postwar problem facing all American manufacturers that is wholly within their province to solve; this is the problem of replacing low operating costs at the top of their thinking, restoring low costs and expense control to the important positions they occupied in management before the necessities of war pushed them into the background.

"Wartime schedules, high production volumes, and excess-profit taxes are insidious enemies of economical management if they are not watched. This is one of the intangible reconversion problems that may easily be overlooked."

GUNPOWDER AND FOOD
both fight for freedom

Today, thanks to technical advances in powder making, plus refrigeration and air conditioning, there is so little variation in powder that gunners know exactly what shell velocity will be. The result? A more accurate gun fire that has contributed to important American victories. Refrigeration and air conditioning keep powder at the correct temperature and humidity levels, not only in the making of the powder, but also in storage places ashore and in powder magazines aboard ship.

Good wholesome food also fights for freedom both on the battle and home fronts! It must, however, be protected from spoilage and bacteria by proper refrigeration.

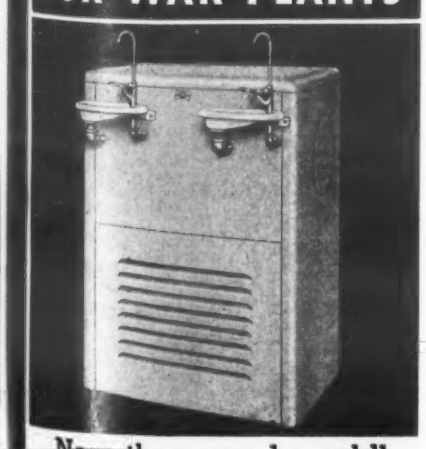
Brunner condensing units are playing a vital part in the making and storing of gun powder as well as in the preservation of our nation's—and that of our allies—food supply on all fronts. The lessons we are learning in the production of condensing units for rapidly multiplying applications essential to the winning of the war, will be applied to good advantage in the production of even more efficient peacetime equipment.

BRUNNER—the symbol of a better day to come—when refrigeration and air conditioning will widen our zones of production—and of well-being—in a world at peace.

Why not consult our engineers—experts in commercial and industrial refrigeration and air conditioning—on any temperature or humidity problem? Brunner Manufacturing Company, Utica, New York, U. S. A.

ARMY E NAVY
BRUNNER
For over 36 years the Symbol of Quality

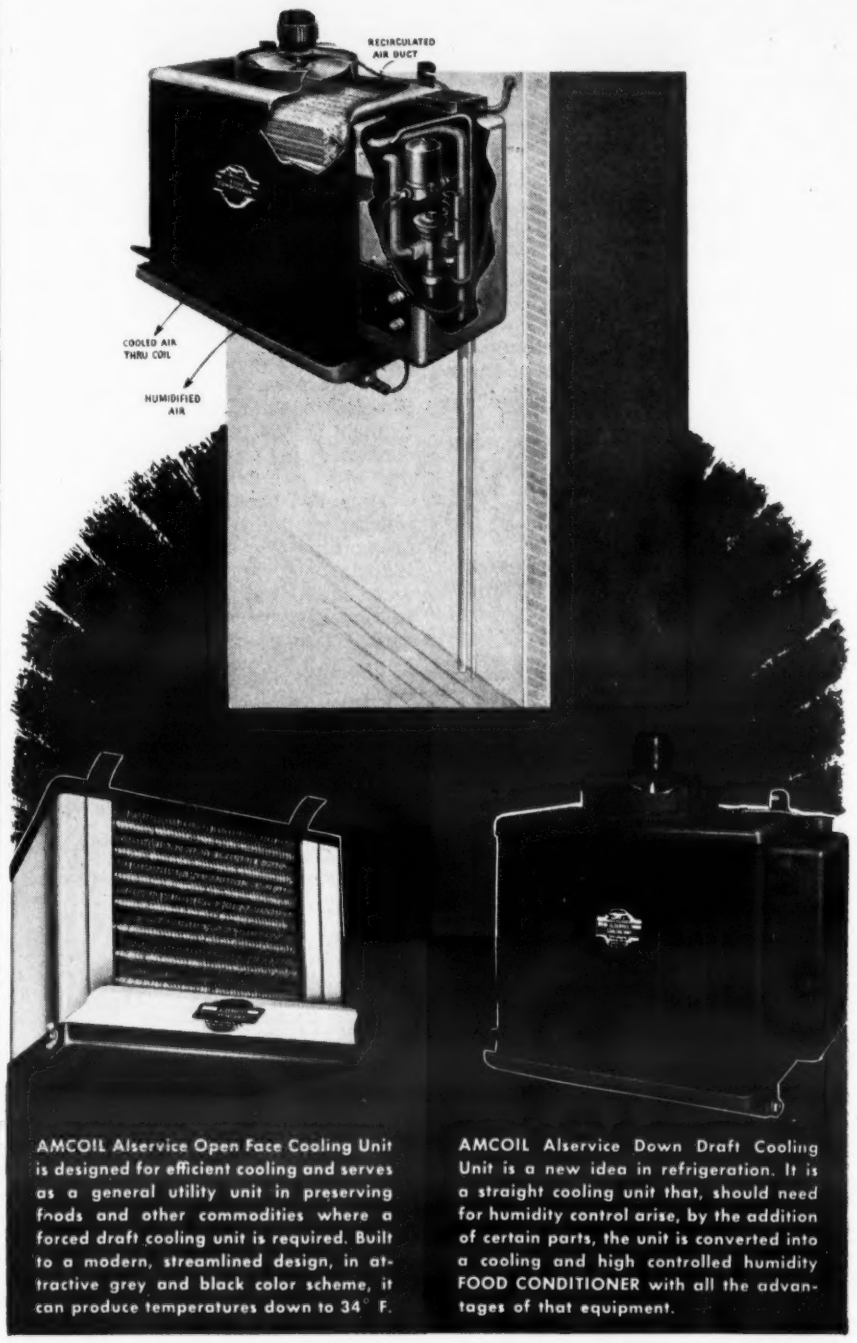
NOW! COOLERS FOR WAR PLANTS



Now they can be sold! Day and Night glass filler coolers for industrial cafeterias; bubbler coolers for war plants.

DAY NIGHT WRITE FOR LATEST DATA
COOLER DIVISION
DAY & NIGHT MFG. CO.
MONROVIA · CALIFORNIA
FACTORY REPRESENTATIVES
NEW YORK — A.C. Homeyer, 682 Bdwy. · Marc Shantz, 565 Wash. Blvd. — CHICAGO
ST. LOUIS — R.H. Spangler, 3331 Market St. · J.E. Parker, 228 2nd St. — DECATUR, GA.

AMCOIL
FOOD CONDITIONER



AMCOIL Alservice Open Face Cooling Unit is designed for efficient cooling and serves as a general utility unit in preserving foods and other commodities where a forced draft cooling unit is required. Built to a modern, streamlined design, in attractive grey and black color scheme, it can produce temperatures down to 34° F.

AMCOIL Alservice Down Draft Cooling Unit is a new idea in refrigeration. It is a straight cooling unit that, should need for humidity control arise, by the addition of certain parts, the unit is converted into a cooling and high controlled humidity FOOD CONDITIONER with all the advantages of that equipment.

BUILT TO ADVANCE
REFRIGERATION STANDARDS
Answering Industry's Demand
FOR A PRACTICAL, DUAL-PURPOSE UNIT

"Give us a compact food preserving unit that combines *high, controlled humidities* with *refrigeration*. AMCOIL SAYS "HERE IT IS" to such a demand with its new FOOD CONDITIONER, now available for immediate shipment under certain priority ratings.

This FOOD CONDITIONER is more than a unit cooler, combining as it does temperatures from 35° F. to 40° F., and high, controlled humidities up to 85%. This double accomplishment preserves foods *without* dehydration, and is made to be used in Walk-In boxes. It protects stored meats, fruits and vegetables, perishable foods, butter and cheese, eggs, flowers, bakers' and confectioners' products—and is practical for retarding dough.

ONE HUNDRED MILLION FOR REPLACEMENT

Government agencies estimate that this year will see sales of commercial refrigeration equipment for replacement reach a total over $100,000,000. AMCOIL engineered units may be purchased on rated orders of AA5, or better under L-38*. Inquire NOW how you can get your share of this business.

AMCOIL
AMERICAN COILS CO.
25-27 LEXINGTON STREET · NEWARK, 5, N. J.

Factory Representatives
P. J. BURRILL, 800 North Clark Street, Chicago, Illinois
FRANKLIN G. SLAGEL, 1501-1509 W. 8th St., Los Angeles, Calif.

*IMMEDIATE SHIPMENT NOW FROM LOCAL JOBBERS OR DIRECT FROM US

3,565 Enemy-Owned Alien Patents on Parts and Procedures Relating to Air Conditioning and Refrigeration Now Are Available to American Manufacturers Looking for Postwar Production

"You have directed this Office to seize all patents controlled by the enemy, regardless of nominal ownership, and to make those patents freely available to American industries, first for the war purposes of the United Nations, and also for the use of American industries in their postwar development."

This paragraph was part of a letter from Leo Crowley, then the country's Alien Property Custodian, to Franklin D. Roosevelt in December, 1942.

The patents referred to represent the finest foreign achievements in scientific research, and they number more than 40,000. Every one of them is now available to public use, nonexclusive and royalty-free.

Up to now, larger industrial plants have done most of the applying. But the country's smaller plants have the most to gain from access to the patents.

Once licensed under an alien patent, a small plant can get technical assistance from any one of several government agencies, and where financial difficulties are all that stand in the way of war production, that also can be remedied through the help of the Smaller War Plants Corp.

Meanwhile the APC office has gone ahead with the business of simplifying availability procedures and of getting actual testing and development under way in the laboratories of government agencies, industries, universities, and endowed foundations.

As fast as the patented procedures are proved, simplified, and fitted to practical application, full details are circulated by way of research centers; universities; technical, professional, and learned societies; and trade journals and newspapers.

The greatest obstacle to putting the patents into production has been industry's lack of awareness of the wide adaptability of the patents offered. This has far outweighed technical difficulties and the frequent occurrence of a patent's intent to disguise rather than to explain the identified procedure.

The purpose of a patent's text often is not to outline the method, but only to identify the process with sufficient definition to prove priority against possible infringements.

Thus the need for further experimentation and research. The APC office likewise has encouraged the industries concerned to cross check with each other on practical manufacturing experience, to look into foreign trade and scientific publications, and to use the experience of more than 200,000 skilled refugees who are only too willing to contribute their knowledge to our country's war production.

By January, 1943, APC had set up a complete index of the enemy-controlled patents, indicating general classification and the number of patents listed thereunder. Any one of the classifications is available for 10 cents, with the exception of exactly nine unusually large ones that are 25 cents each.

A complete catalog of all patents and patent applications also is available for $5. Purchase of either includes free supplement and correction service, meaning that any new discoveries and developments are forwarded to every plant taking part in production under that patent process.

The index includes a considerable field of classifications contributing to air conditioning and refrigeration. Outstanding are the following, reproduced with title, number of patents vested, the number of those applied for, and the classification number under which each is filed at the APC offices in Chicago:

The scope of the patents formerly under enemy control is constantly being added to. General Electric Co. recently assigned to APC 37 patents, originally acquired from Fried Krupp Aktiengesellschaft, covering cemented or sintered hard cables, used in making machine tools.

APC had control over 16 others on the same products and processes, used wherever great hardness and wearability are necessary. All 53 are now available to any manufacturer.

American production will be augmented further by the sale of most of the 150 enemy-owned industrial plants now under its jurisdiction. These will be sold under sealed bids, the principle qualification being that the successful bidder must be capable of putting his plant into production.

The procedure for obtaining a license under a patent controlled by APC has been simplified to include the following steps:

1. Write to Raymond F. Linehan, the Office of Alien Property Custodian, Field Bldg., Chicago 3, Ill., for an index of titles of patent classifications.

2. List the classifications you are interested in, and order them by class number. The index will indicate the nine classifications that are 25 cents each instead of the usual 10 cents. Mail this request list to APC.

3. From the classified lists pick the specific patents you want. Printed copies of these, with drawings and specifications, can be obtained by mail from the Commissioner of Patents, Washington, D. C., for 10 cents each.

4. You must be licensed by APC before using any of these patents. Send your letter of application (as outlined below) to APC in Washington for a license to use any of the patents you pick out. The U. S. Alien Property Custodian is James E. Markham, National Press Bldg., Washington 25, D. C.

Enclose application fee of $50, plus $5 for each additional related patent to be covered in one license. Your money will be promptly refunded if no license is issued.

5. Write to APC for any technical assistance regarding methods of using the patents you are licensed under. This assistance, as well as any subsequent developments worked out on the patents you are using, is sent to you free of charge.

In applying for a license to use a vested patent or patent application, as required in step 4 above, the following information about the nature of the business it will be used in, and the specific use it will be put to, must be submitted in your application:

a. Your identification and qualifications:

(1) Name and address; (2) nature of business; (3) legal form of business—corporation, partnership, sole proprietorship, etc.; (4) registered trade name, if any—for partnership and proprietorship business only; (5) if a corporation, date and State of incorporation; (6) if partnership, date of formation; (7) name, citizen-

(Concluded on Page 29)

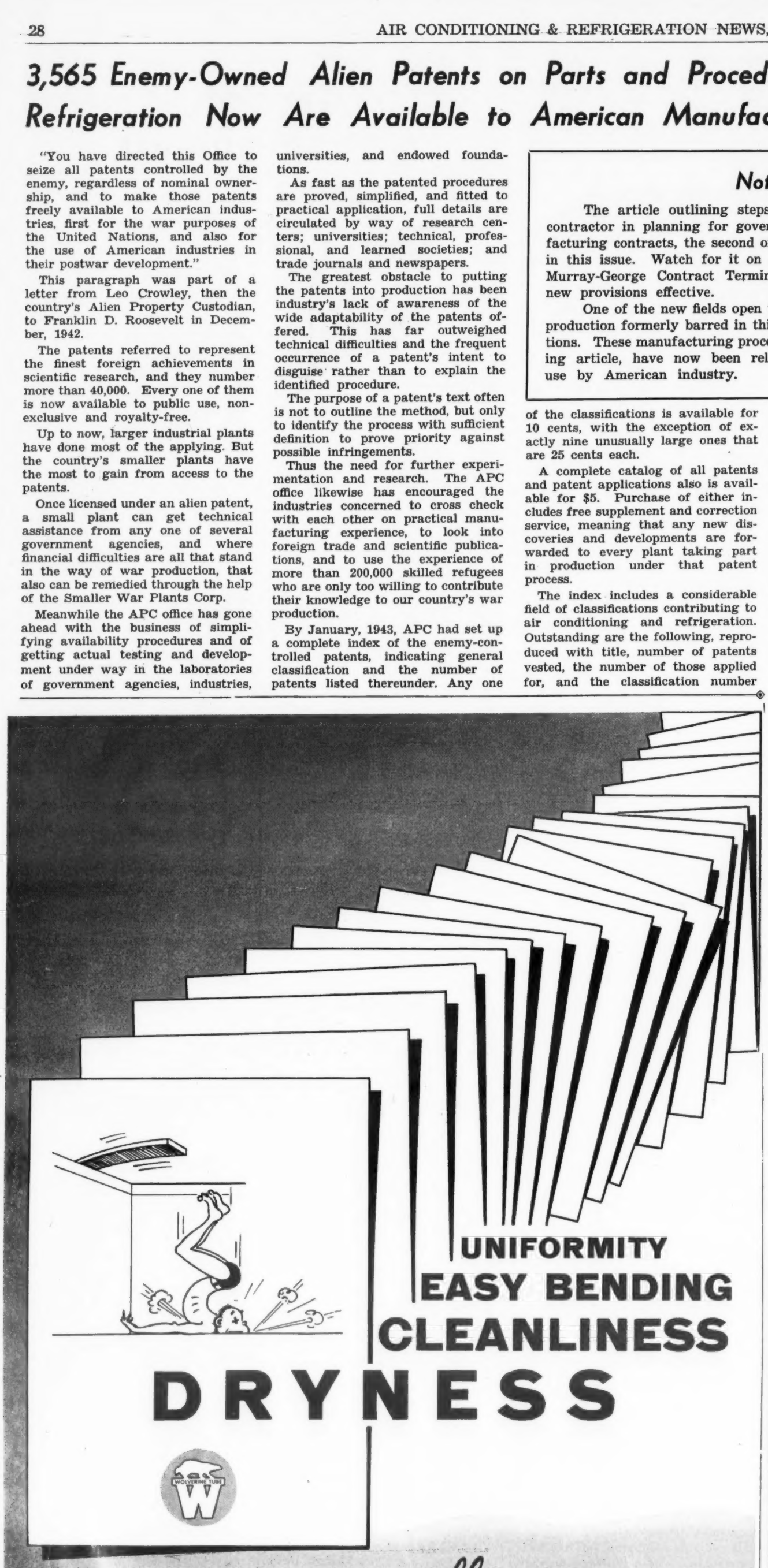
Notice!

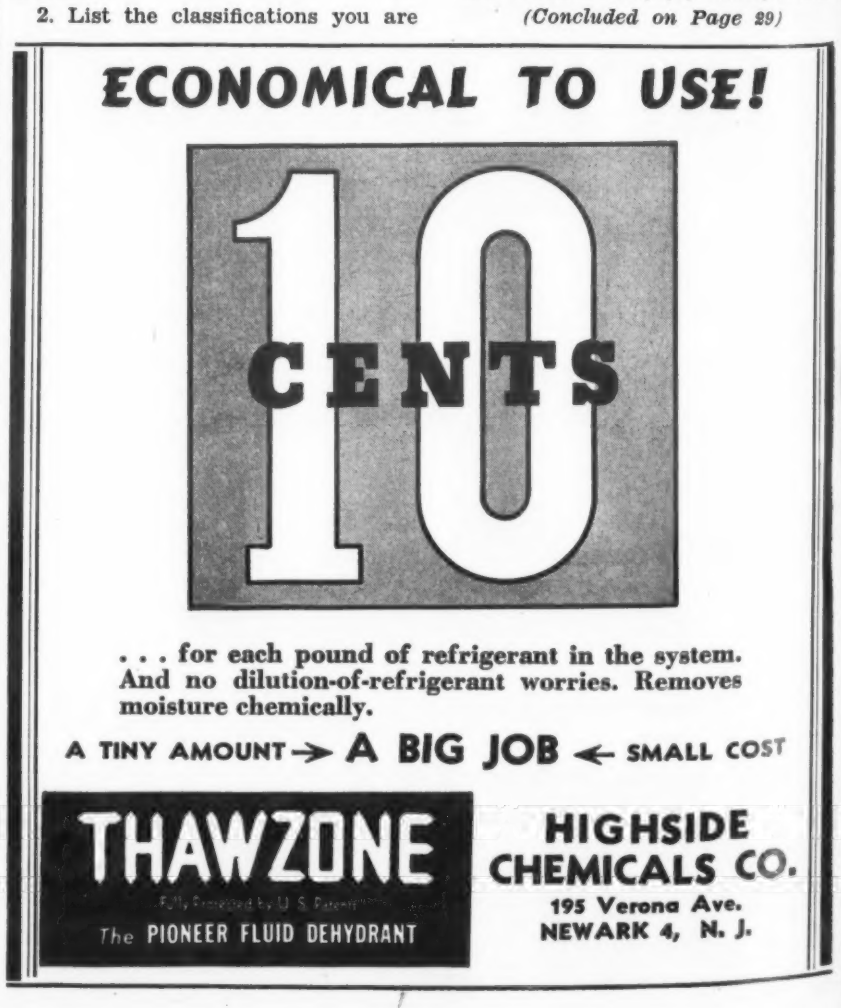
The article outlining steps to be taken by the small war contractor in planning for government cancellation of his manufacturing contracts, the second of a series of four, will not appear in this issue. Watch for it on Aug. 21. Recent passage of the Murray-George Contract Termination Act has made important new provisions effective.

One of the new fields open to the small manufacturer will be production formerly barred in this country by alien patent restrictions. These manufacturing procedures, outlined in the accompanying article, have now been released by government order for use by American industry.

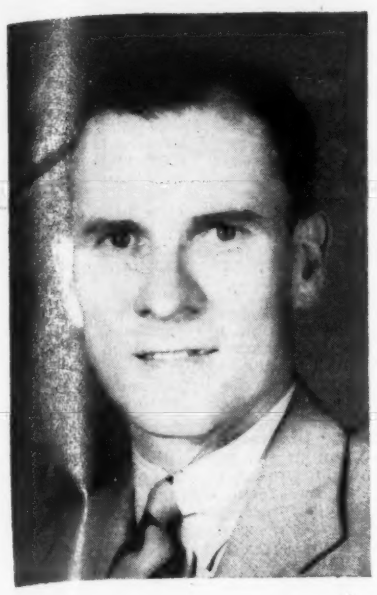
These Patents Are Now American Property

Title	Patents Issued	Applied For	Classification Number
Automatic temperature and humidity regulation	72	4	236
Concentrating evaporators	38	..	159
Drying and gas or vapor contact with solids	110	4	34
Electric circuit makers and breakers	303	19	200
Connectors	49	3	173
Conductors and insulators	175	25	174
Heating	245	14	219
General applications	450	62	175
Fluid-pressure regulators	22	1	50
Gas and liquid contact apparatus	274	17	261
Heat exchange	169	9	257
Heating	163	3	263
Heating systems	25	1	237
Liquid and gaseous fuel burners	98	7	158
Liquid heaters and vaporizers	257	4	122
Multiple valves	38	..	277
Pipe joints and couplings	66	10	285
Pipes and tubular conduits	40	8	138
Pumps	198	25	103
Refrigeration	283	20	62
Stoves and furnaces	60	3	126
Thermostats and humidostats	9	1	297
Valved pipe joints and couplings	5	..	284
Valves	106	11	251
Ventilation	33	4	98
Washing apparatus	21	1	141
Total	3,309	256	



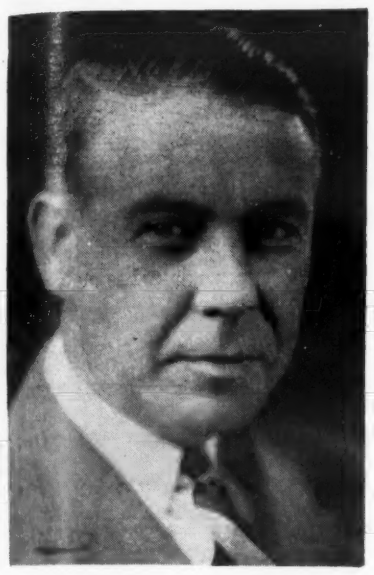

ECONOMICAL TO USE!
10
CENTS
. . . for each pound of refrigerant in the system. And no dilution-of-refrigerant worries. Removes moisture chemically.
A TINY AMOUNT → A BIG JOB ← SMALL COST
THAWZONE
The PIONEER FLUID DEHYDRANT
HIGHSIDE CHEMICALS CO.
195 Verona Ave.
NEWARK 4, N. J.

Philco's Field Sales Leaders



JOHN F. LEAHY
Sales manager, Yankee Division

JOHN RAMSEY
Sales manager, Southwest Division



JOSEPH R. McCOY
Sales manager, Atlantic Division

JOSEPH A. BILHEIMER
Sales manager, Central Division

* * *

How To Make Use Of Alien Patents

(Concluded from Page 28, Column 5)

ship, and legal residence of proprietor, partners, officers, and directors, as the case may be; (8) if a corporation, the percentage of voting stock owned by or for the benefit of non-citizens of the United States.

b. Identification by number and title of the specific patents or patent applications under which a license is sought.

c. Facilities, if any, for using the inventions sought to be licensed—e.g., actual equipment, technical skill, and available or proposed capital.

d. Purpose for which the license is needed, and its relation, if any, to the war effort.

e. Statement as to whether any existing licenses are known under the patents or patent applications involved in the request.

Letters of application should be sent, with license application fee, to APC in Washington, D. C. Correspondence in regard to licensing negotiations may be handled by the applicant, or by his designated attorney if a power of attorney accompanies the letter of application.

The important part these patents can play in war production is up to the small manufacturer. Brigadier General Robert W. Johnson explained to Crowley, just before resigning his Army commission in order to be able to give all his time to furthering the plan.

He pointed out at the time that of 200,000 companies probably eligible to take over some aspect of production under these patents, only 389 companies had done so. The majority of these were giant corporations, and they had adopted more than 3,000 of the patented procedures.

When the patents were first made available, he explained, only the larger manufacturers had the means to test and experiment with them. Now, with government and industrial cooperation helping, the smaller plants that usually prove more flexible and adaptable can take part in war production.

District Sales Heads Appointed by Philco

PHILADELPHIA — Promotion of four Philco sales executives to positions as division managers in the company's postwar distribution organization was announced last week by Thomas A. Kennally, vice president in charge of sales for Philco Corp.

Joseph R. McCoy has been named manager of Philco's Atlantic division, with headquarters in Philadelphia; Joseph A. Bilheimer becomes manager of Philco's central division, with headquarters in Chicago; John F. Leahy has been chosen to be manager of Philco's Yankee division, with headquarters in Boston; and John E. Ramsey is the new manager of the company's southeast division, with headquarters in Kansas City.

Mr. McCoy has served the company as district manager in various territories. When Philco went into full war production in 1942, Mr. McCoy was appointed ordnance representative for the company.

Mr. Bilheimer has served Philco as district representative with headquarters in Oklahoma City and Kansas City, and as assistant manager of the Philco Training School in Philadelphia.

More recently Mr. Bilheimer was a district representative, with headquarters in St. Louis.

Mr. Leahy, since 1934, has served as assistant general sales manager of Philco Distributors, Inc., in New York City; as sales manager of the Southwest division, and as manager of the company's central and eastern divisions.

From 1939 until 1940 he was sales manager of Philco Distributors, Inc., in New York City. During the 1940-44 period Mr. Leahy was district representative for the company in the Boston area.

Mr. Ramsey has served as the company's district representative for the states of Mississippi, Louisiana, Alabama, Tennessee, Arkansas, Texas, Nebraska, Kansas, and Oklahoma. Until his present promotion, he was district representative in Kansas City.

Frigidaire, Gibson and L & H Get 4th Quarter Electric Range Quotas

WASHINGTON, D. C.—Authorization to produce 5,638 domestic electric ranges in the fourth quarter of 1944 has been granted to three manufacturers who are able to make them without interfering with war production, WPB announced Aug. 7. The manufacturers are:

Frigidaire Division, General Motors Corp., Dayton, Ohio, 2,344.

Gibson Refrigerator Co., Greenville, Mich., 2,500.

A. J. Lindemann & Hoverson, Milwaukee, Wis., 794.

These manufacturers are the first ones authorized to make ranges in the fourth quarter. One company, Frigidaire Division, General Motors Corp., had previously been authorized to make 782 ranges in the third quarter. Two other manufacturers, A. B. Stoves, Inc., Battle Creek, Mich., and the Malleable Iron Range Co., Beaver Dam, Wis., were recently authorized to produce 9,000 and 3,000 ranges, respectively, in the third quarter.

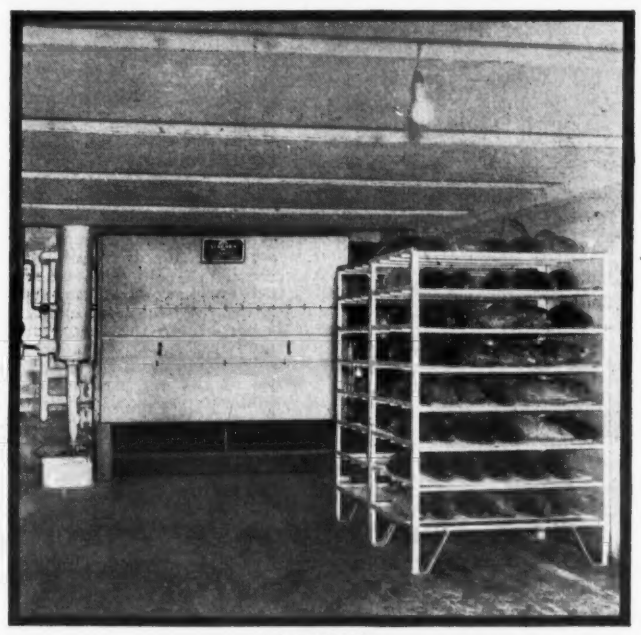
All the electric ranges assigned for production Aug. 7 will be standard four-burner models. Since ranges of this type have not been made for about two years, and equipment will have to be made ready for operation, production will de delayed, it was explained. Manufacturers will also encounter some delay in obtaining delivery of sheet metal and other materials and components, WPB said.

None of the four-burner ranges will be available in stores until late this year. Most of them will not be on sale until the beginning of 1945. They will be available only for essential civilian replacement purposes.

In the interim, some three-burner, apartment house models, not required to fill military orders or orders for new privately financed war housing projects of the Federal Housing Administration, National Housing Agency, may be sold for essential civilian replacement purposes.

About 22,000 three-burner electric ranges already have been built. Production of 18,420 additional ranges (including both three and four-burner types) has been authorized for the third and fourth quarters. This leaves a total of 47,580 ranges to be authorized under the 1944 program for 88,000.

How to PRE-COOL or FREEZE
Fruits, Vegetables, Meats, Fish, before Dehydration, for Highest, Uniform Quality



PATENTED

● The NIAGARA "No Frost" System provides a reliable method for obtaining:

1. *Extreme low temperatures for freezing by the air method.*
2. *Greater economy in refrigerating space below 32° F.*
3. *More dependable refrigeration and better control of temperatures.*

The "No-Frost" Method eliminates icing of coils and increases the capacity of the compressor system, allowing an increase in refrigerated space without greater equipment cost.

Practical experience for many years. Users of NIAGARA "No-Frost" Systems are well known large concerns expertly processing large volumes of different foods.

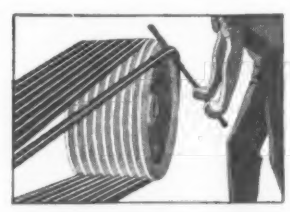
Write for complete information and Niagara Bulletins 83 and 95. Address Dept. AC-84.

NIAGARA BLOWER COMPANY
General Sales Office: 6 E. 45th Street, New York City
37 W. Van Buren St., Chicago — Fourth & Cherry Bldg., Seattle
District Engineers in Principal Cities

NIAGARA EQUIPMENT FOR FOOD INDUSTRIES: AIR CONDITIONERS, DEHYDRATORS, COOLERS, "NO-FROST" METHOD OF PRE-COOLING, FREEZING AND HOLDING, AERO HEAT EXCHANGERS, "DUO-PASS" AERO CONDENSERS

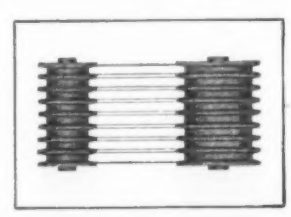
How to Lengthen V-Belt Life—
ON ALL REFRIGERATION AND AIR-CONDITIONING SYSTEMS

You never need to "baby" your tough, firm-gripping Dayton V-Belts, but if you will give them just reasonable care you can add months and years to their remarkably long lives. With the vast increase in the use of Dayton V-Belt Drives for compressors and fans in commercial, industrial and military service, proper maintenance becomes more than ever a patriotic duty. Here are 9 helpful hints:

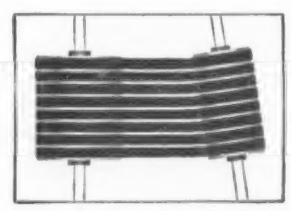


1. When installing, don't pry V-Belts over pulley grooves—instead, slide motor forward and drop belts over the pulleys. Then move motor back until the proper tension is obtained.

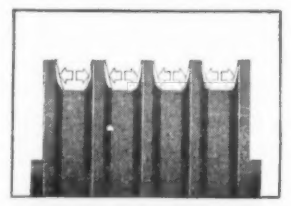
2. When the proper tension is reached, belts have "live springy vibration." When too much slack exists, belts feel dead when struck by hand.



3. Check and line up pulleys, groove for groove, and in parallel. Misalignment wears both belts and pulley grooves excessively.



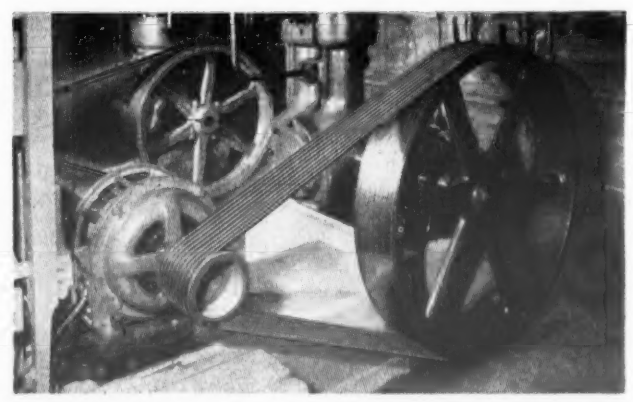
4. Check both shafts for parallel alignment so each belt can pull its share of the load.



5. Check and replace worn pulleys—they wear out belts prematurely.

6. Don't replace a *part* of a set of V-Belts with new belts as the new belts will hog the load and wear out quickly. Instead, *replace the whole set* and conserve any good belts from the old set for spares.

7. Don't let oil leak on V-Belts. Where an oily condition prevails, use the Dayton Oil-proof V-Belt.



8. Don't hang V-Belts on nails, hooks or across boards or other objects which might cause them to bend sharply.

9. Belts not in use should be stored in a cool, dry place away from direct sunlight and high temperatures.

You are invited to call on your nearest Dayton Distributor for helpful suggestions or service. He will gladly help you with your V-Belt problems.

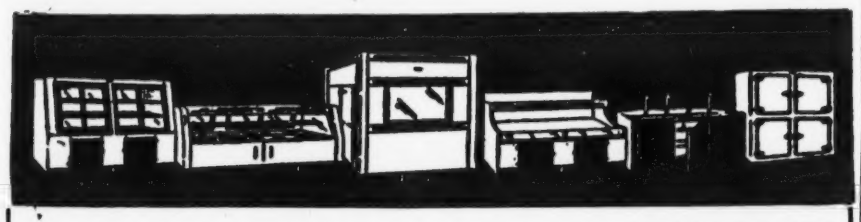
THE DAYTON RUBBER MFG. CO., DAYTON 1, OHIO
Co-Operators of a Government Synthetic Rubber Plant
DAYTON RUBBER EXPORT CORPORATION
38 Pearl Street, New York, N. Y., U. S. A. *Cable Address:* WIDBLOCO

V-Belts by Dayton Rubber
WRITE FOR FREE WALL CHART
The Mark of Technical Excellence in Synthetic Rubber

GENUINE MAYFLOWER
CONDENSING UNITS & COMPRESSORS
Jobber Inquiries Invited
A complete line backed by nearly a quarter century of user confidence. Write for prices.

MAYFLOWER PRODUCTS, INC
13 S. 5th St., Richmond, Ind.

MASTER
Food Conservators
have the call. This Modern Food Conserver has many unusual advantages. Sold through distributors of refrigeration and insulation.
Get our proposition
Master Manufacturing Corp.
121 Main St. Sioux City 4, Iowa
OVER 650,000 IN USE


BUY BONDS TODAY AND PLAN FOR TOMORROW
OUR POST-WAR PROGRAM WILL BENEFIT YOU!
ASK US ABOUT IT NOW
WRITE DEPT. 220
FOGEL REFRIGERATOR COMPANY Philadelphia, Penna. Since 1899

STANGARD
PRIME SURFACE Cold Plates
FOR MAXIMUM EFFICIENT REFRIGERATION

★ For Locker Plants, Sharp Freezing, Ice Cream Cabinets, Hardening Rooms, Soda Fountains, Storage Rooms, Milk Coolers, Liquid Cooling, Food Counters and other similar uses.
Write us today for complete information and catalog.
Stangard Facilities are contributing to the production of materials for our National Defense.
THE STANGARD-DICKERSON CORP.
46-76 Oliver Street, Newark, N. J.

★ Here's PAUL JACKEL, former Tyler Fixture Corporation Field Representative in New England. Paul joined up early and is now an officer in the United States Navy. When the war is over, we expect Paul to be back with headquarters in Boston, doing a swell job with a great new post-war Tyler line.

TYLER REFRIGERATORS

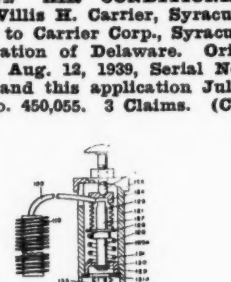
More important than ever in the war on moisture
Order from your jobber

IMPERIAL TORPEDO DEHYDRATOR
One piece streamlined shell—fewer joints—no soft solder—less chance of leakage. Copper and brass construction. Packed with "Silica Gel". Built in sizes up to 7 h.p.
IMPERIAL BRASS MFG. CO., 565 S. RACINE AVE., CHICAGO 7, ILL.

PATENTS

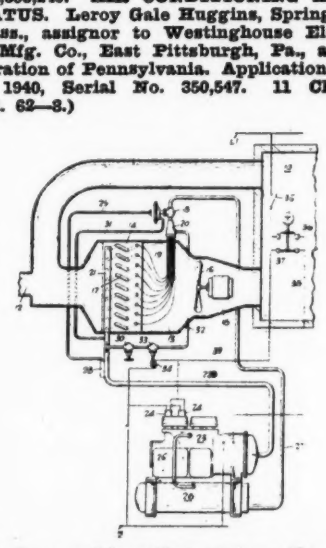
Weeks of July 11 & 18

2,353,144. AIR CONDITIONING SYSTEM. Willis H. Carrier, Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y., a corporation of Delaware. Original application Aug. 12, 1939, Serial No. 289,749. Divided and this application July 7, 1942, Serial No. 450,055. 3 Claims. (Cl. 257—6.)



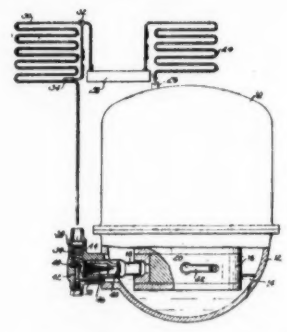
1. In a valve and fluid circuiting arrangement, a heat exchanger, a manually operated valve device, fluid supply and return lines, means for circulating cooled fluid through said lines to said valve device and exchanger under summer operating conditions, means for circulating heated fluid through said lines to said valve device and exchanger under winter operating conditions, a thermal bulb positioned in contact with said fluid supply line, an expansible bellows and pressure control line connected to said bulb, a slide plate attached to said bellows, a casing, said plate being mounted in slidable relation to said casing, a pair of apertures in said casing adjacent said valve device, indicating symbols on said plate, said symbols being arranged with respect to said apertures so that when cooled fluid is circulated through said valve device the indicating symbols exposed to view through the apertures will be in a certain order from left to right whereas when heated fluid is circulated through the valve device the symbols will be exposed to view in reverse.

2,353,240. AIR CONDITIONING APPARATUS. Leroy Gale Huggins, Springfield, Mass., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Aug. 3, 1940, Serial No. 350,547. 11 Claims. (Cl. 62—3.)



1. In a refrigerating system, the combination of an evaporator, a thermostatic expansion valve operating to regulate the flow of refrigerant to said evaporator in response to the superheat of the vaporized refrigerant leaving the same and including an element responsive to the temperature of said leaving refrigerant, means providing restricted flow of liquid refrigerant from a portion of the refrigerant circuit containing liquid refrigerant at a pressure substantially higher than the refrigerant pressure within the evaporator and utilizing said restricted flow of liquid refrigerant to reduce the temperature to which said element is subjected, whereby said valve restricts the flow of refrigerant to said evaporator and the portion of the evaporafor containing liquid refrigerant is reduced, and means for controlling said restricted flow.

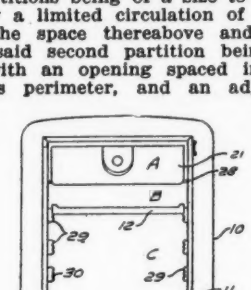
2,353,347. REFRIGERATING APPARATUS. Alex A. McCormack, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Sept. 13, 1941, Serial No. 410,752. 7 Claims. (Cl. 62—8.)



1. In combination; an evaporator, a condenser; a compressor including a lubricant supply casing into which said compressor discharges; refrigerant flow connections between said evaporator, condenser, and compressor including a suction line between said evaporator and the inlet of said compressor; and means for restricting the flow of refrigerant in said suction line; said means comprising a passage leading from a point below the lubricant level in said lubricant supply casing to the suction line, a plunger disposed in said passage preventing the flow of lubricant through said passage and having means for restricting the flow of refrigerant in said suction line in a predetermined position of said plunger, and spring means for opposing the force exerted by the lubricant against said plunger.

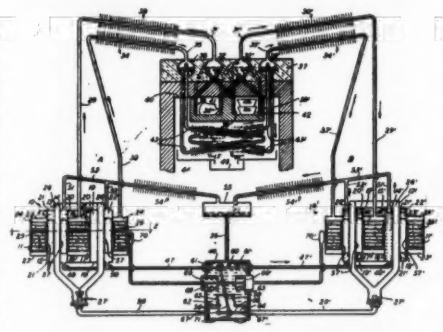
2,353,361. REFRIGERATOR. Homer E. Rosebrook, Greenville, Mich., assignor, by mesne assignments, to Gibson Refrigerator Co., Greenville, Mich., a corporation of Michigan. Application Aug. 3, 1940, Serial No .350,405. 7 Claims. (Cl. 62—89.)

1. In a mechanical refrigerator including an insulated food storage chamber, a substantially imperforate horizontally extending partition disposed in the upper part of said chamber and arranged to form a freezing compartment thereabove, a second substantially imperforate horizontally extending partition disposed below and in closely spaced relation to said first partition and arranged to form a chilling compartment thereabove and a cooling compartment therebelow, each of said partitions being of a size to provide for only a limited circulation of air between the space thereabove and therebelow, said second partition being provided with an opening spaced inwardly from its perimeter, and an adjustable



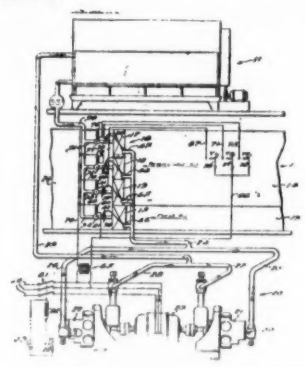
closure for said opening whereby to control the circulation of air between the space above and below said partition, and a refrigerant evaporator disposed in intimate heat exchange relation with said first mentioned partition and being directly exposed to the ambient atmosphere contained in the space between the two partitions, said evaporator comprising the sole means within the storage chamber for refrigerating the same.

2,353,714. ABSORPTION REFRIGERATING APPARATUS. Nils Erland af Kleen, Stockholm, Sweden, assignor to Kleen Refrigerator, Inc., Hoboken, N. J., a corporation of Delaware. Application Dec. 17, 1940, Serial No. 370,431. 17 Claims. (Cl. 62—118.)



8. In a refrigerating apparatus; the combination of a vessel divided into a plurality of chambers including one constructed and arranged to form that part of a refrigerating system in which a refrigerating fluid is generated intermittently and another constructed and arranged to form that part of another refrigerating system in which a refrigerating fluid is generated intermittently, and means for heating said vessel intermittently for generation of the refrigerating fluids in said first-named and second-named systems, respectively.

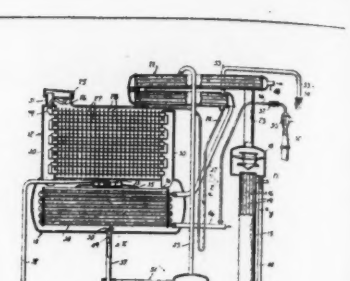
2,353,804. AIR-CONDITIONING SYSTEM. Irving C. Baker and Rafael A. Gonzalez, Dayton, Ohio, assignors to Chrysler Corp., Detroit, Mich., a corporation of Delaware. Application Feb. 14, 1941, Serial No. 378,964. 9 Claims. (Cl. 62—6.)



1. An air conditioning system comprising a fresh air duct through which fresh air may be moved, an evaporator extending across all of said duct, a recirculated air duct through which recirculated air may be moved, a plurality of evaporators arranged in a bank extending across all of said recirculated air duct so that a portion of the air stream in said recirculated air duct passes through each of said evaporators, a tempering duct in which all of the air leaving said evaporators mixes, condensing means arranged to feed refrigerant in parallel to all of said evaporators, a variable capacity compressor arranged to compress refrigerant returned from all of said evaporators and to feed compressed refrigerant to said condensing means, automatic capacity regulating means for varying the capacity of said compressor in accordance with the condition of the refrigerant returned to said compressor, control means whereby the evaporator in said fresh air duct is fed refrigerant at all times when the compressor is in operation and only when it is in operation, and other control means whereby, when the compressor is in operation, and only when it is in operation, refrigerant may be fed into one or more of the evaporators in said recirculated air duct in response to the temperature of the recirculated air in said recirculated air duct.

2,353,859. REFRIGERATION. Albert R. Thomas, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application April 29, 1941, Serial No. 390,871. 10 Claims. (Cl. 62—119.)

8. In an absorption refrigeration system having a plurality of elements interconnected for circulation of refrigerant and absorption liquid, said system having one group of elements operable at one pressure and another group of elements operable at a lower pressure with means for maintaining the pressure differential between the groups of elements, one portion of the system of interconnected elements comprising a vertically extending



conduit connected to receive absorption liquid at its upper end from one of the elements of the low pressure group, a separating chamber into which the lower end of the conduit extends, means cooperating with the upper end of the conduit for positively withdrawing non-condensible gases from the element and trapping the gases in the liquid to transfer them to the separating chamber, said absorption liquid in the conduit comprising a part of the means maintaining the pressure differential between the high and low pressure groups of elements, means connecting the separating chamber to an element of the high pressure group whereby the non-condensible gases will be transferred from an element of the low pressure group to an element of the high pressure group while maintaining the pressure differential between the groups of elements, and an exhaust pump connected to the element of the high pressure group to which the gases are

(Concluded on Page 31, Column 3)

'RECOLD' COILS WATER-DEFROST
CANADA PAT. 398,295 U. S. PAT. 2,210,393 NEW ZEALAND PAT. 62,376
REFRIGERATION ENGINEERING INC.
LOS ANGELES • CALIFORNIA

UNIVERSAL COOLER
MARION OHIO BRANTFORD ONTARIO
WE SELL TO MANUFACTURERS ONLY
UNIVERSAL COOLER CORPORATION
Automatic Refrigeration since 1922

1944
Refrigeration Supply Catalog
Sent on request
REFRIGERATION EQUIPMENT CO.
101 E. 24th St., Kansas City 8, Mo.

La Crosse Beer Dispensing Equipment with a National reputation for Quality and Performance.
La Crosse Novelty Box Mfg. Co.
LA CROSSE, WISCONSIN

BUNDY TUBING
ENGINEERED TO YOUR EXPECTATIONS
BUNDY TUBING CO., DETROIT

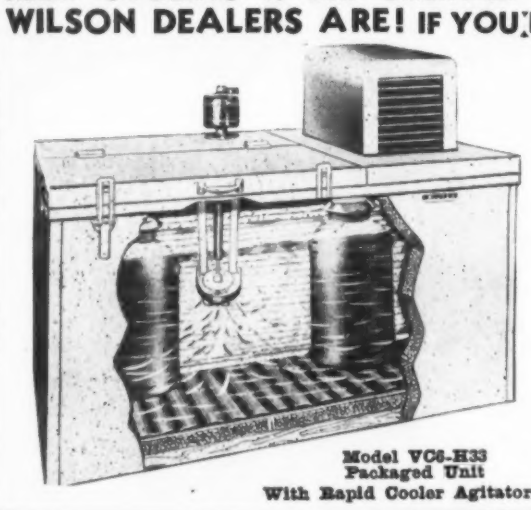
MARSH
Gauges . . . Dial Thermometers
Recorders . . . Valve Specialties.
JAS. P. MARSH CORPORATION
2067 Southport Ave., Chicago, Ill.

HEAT TRANSFER EQUIPMENT
MARLO COIL COMPANY
SAINT LOUIS, MISSOURI

ICE PLANTS AND COMPRESSORS BOUGHT AND SOLD ALL STANDARD MAKES, ALSO ICE SCORERS, CUBERS AND CANS AT HALF PRICE. WIRE OR WRITE BORN CO., 35 E. WACKER, CHICAGO 1, ILL.

MIDWEST
Household and Commercial Refrigerator Cabinets
Now Making VITAL War Products for Army and Navy
MIDWEST MFG. COMPANY

Use CHICAGO SEALS for seal replacements
A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

MILK COOLING IS BIG BUSINESS .. . . ARE YOU GETTING YOUR SHARE?
WILSON DEALERS ARE! IF YOU HAVE MODERN SALES AND SERVICE, WRITE NOW.

Model VC6-H33 Packaged Unit With Rapid Cooler Agitator
WILSON
SYSTEMS OF MILK COOLING
A TYPE FOR EVERY REQUIREMENT
3. Verti-Coil with RAPID-COOLER AGITATOR
• The Wilson Verti-Coil Cooler equipped with the RAPID-COOLER AGITATOR (Pat.) WILL COOL TWICE THE CABINET CAPACITY DAILY WITH EXTREME RAPIDITY.
• ALL WILSON MILK COOLERS ARE NOTED FOR:
RAPID AND UNIFORM COOLING.
MAXIMUM COOLING EFFICIENCY.
LOW COST OF OPERATION.
LIFE-TESTED CONSTRUCTION.
This advertisement is one of a series on Wilson Commercial Refrigeration
WILSON CABINET CO. SMYRNA DELAWARE

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.
RATES for all other classifications $5.00 per insertion. Limit 50 words.
Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count.
PAYMENT in advance is required for advertising in this column.

EQUIPMENT WANTED

USED EQUIPMENT WANTED: Air conditioning and refrigeration systems and machinery including self-contained units, coils, high-sides, shell and tube coolers and controls. Highest cash for large sizes. We urgently need two 15 HP motors and two compressors without condensers. E. M. FAIRBANKS CO., 475 Fifth Ave., New York 17, N. Y.

FRANCHISES WANTED

LEADING JOBBERS South Africa, established connection, want to contact manufacturers and/or representatives all types refrigeration and air conditioning accessories including Fractional Horse Power Electric Motors and components with view to representing them and marketing their products Southern Africa. Box 1599, Air Conditioning & Refrigeration News.

MANUFACTURER'S AGENT with well established following among refrigeration and air conditioning jobbers, contractors, and sales-service organizations in the Metropolitan New York market now making plans for postwar equipment distribution. Seeks one or two outstanding lines for intensive development in this area. Box 1604, Air Conditioning & Refrigeration News.

Established CURTIS REFRIGERATION AIR CONDITIONING AND COMMERCIAL 1864
Curtis Refrigerating Machine Division
of Curtis Manufacturing Company
1912 Kienlen Ave. St. Louis, Mo.

AMANA **Commercial REFRIGERATION**
Modern Display Cases
Coolers, Refrigerators
AMANA SOCIETY, AMANA, IOWA

REFRIGERATION PRODUCTS
fedders
BUFFALO, N. Y.

EXCEPTIONAL OPPORTU NITY

Supervising Refrigeration Service Engineer

If you have extensive experience servicing Freon and Ammonia systems and a record of proven reliability, if you want an opportunity for advancement to supervising responsibility and a permanent career, send complete details promptly.

J.R.LEWIS, CARRIER CORPORATION
405 LEXINGTON AVE., NEW YORK 17, N. Y.

Marine Construction Supervisor

with thorough training and experience in refrigeration. Applicant must be qualified to direct mechanics and assume responsibilities, representing manufacturer in shipyards on east coast. Send resume to:

Box 1602, Air Conditioning & Refrigeration News.

WANTED IMMEDIATELY

Experienced air conditioning and industrial refrigeration service engineer with engineering education, capable of analyzing and supervising. Permanent position. Write the Supervisor, Technical Employment, Union Bank Building, Pittsburgh 22, Pennsylvania.

WESTINGHOUSE ELECTRIC & MANUFACTURING CO.

HAWAII. Organization headed by aggressive staff of trained appliance sales experts. Adequate Capital. Desires contacts with responsible manufacturers. Electrical appliances and allied lines. ELECTRICAL DISTRIBUTORS, LTD., P. O Box 228, Honolulu 10, Hawaii.

EQUIPMENT FOR SALE

BEER COOLERS, direct draw for 2 half barrels. Brand new. $325.00, F.O.B. Philadelphia, Pa. Milk coolers, 4 and 6 can capacity. Self contained with General Electric condensing units. 68 cubic foot. Hussman Porcelain reachin. Call Rittenhouse 6359 or write JORDON REFRIGERATOR COMPANY, 235-237 North Broad St., Philadelphia 7, Pa.

FOR SALE: Milk Coolers, Bottle Coolers, converted Freezers. 1,000 complete High-Sides Frigidaire, Kelvinator ¼ H.P. to 2 H.P. Motors up to 5 H.P. send for list and price. EDISON COOLING CORPORATION, 310 E. 149th St., New York, N51, New York.

OFFERING QUANTITY of used Frigidaire model K ½ H.P. condensing units. All units checked and in running condition; $34.50. Box 1594 Air Conditioning & Refrigeration News.

ICE REFRIGERATED bottle coolers. Three-case capacity. Streamlined. All steel, heavily insulated. Casters. Also, for cooling fish, storing cracked ice, etc. Suitable for homes. $19.00 net, F.O.B. Philadelphia. New. No Priority. Streamlined. 100 bottle capacity size, $36.50 net. Convertible for mechanical operation. GENERAL REFRIGERATOR COMPANY, 5400 Eadom Street, Philadelphia 37, Pa.

POSITIONS AVAILABLE

SALES ENGINEER is needed by Central States parts jobber; good salary and commission. This is a permanent position with postwar future. Must have complete knowledge of domestic and commercial refrigeration. Give complete information in your application. Box 1592, Air Conditioning & Refrigeration News.

EXPERIENCED shop foreman, by old established New York City concern, to rebuild ice-cream cabinets. Write past experience, salary wanted. Box 1586 Air Conditioning & Refrigeration News.

APPLICATION ENGINEERS. Design Engineers. Prominent manufacturer of commercial refrigeration coils and equipment has opening for experienced, high calibre engineers to design new equipment, re-design prewar lines, and application work. Excellent salary and opportunities for advancement with large, growing, active organization. Box 1585, Air Conditioning & Refrigeration News.

WANTED—Experienced engineer by well established, nationally known commercial refrigeration cabinet manufacturer, Midwest. Take complete charge Engineering, Designing, Drafting Department, working close harmony with Sales Department producing postwar products. Can offer to qualified person with permanent place, growing organization with unlimited advancement, salary remuneration — commensurate with proven ability. Box 1597, Air Conditioning & Refrigeration News.

RESPONSIBLE MID-SOUTH manufacturer making complete line for Store Installations wants manufacturing executive familiar with Commercial refrigeration who can supervise design and operation of wood working plant manufacturing wall shelving and a complete line of refrigerated Equipment. Operation offers an unusual postwar opportunity. Box 1579, Air Conditioning & Refrigeration News.

POSITION OPEN for a live Cost Accountant in a lively machinery manufacturing concern with 1,000 employes. Involves several products under simultaneous production; gray iron foundry operation; only experienced persons need apply. Good permanent connection for the right man. Box 1571, Air Conditioning & Refrigeration News.

CABINET DESIGN engineer, perhaps an assistant now, to head development on new style domestic refrigerator for production in immediate future. Familiarity with present types of box construction, insulation, good working knowledge of refrigeration essential. Excellent opportunity for permanent position with well established mid-western concern. Box 1601, Air Conditioning & Refrigeration News.

REFRIGERATION SERVICEMAN. State qualifications, experience. References. Memphis, Tenn. Box 1598, Air Conditioning & Refrigeration News.

LABORATORY PROJECT engineers with experience in research or development work able to handle all testing of a product or specialized project. Nationally known refrigerator manufacturer with excellent present and postwar opportunities. State qualifications and experience. Box 1603, Air Conditioning & Refrigeration News.

POSITIONS WANTED

EXPERIENCED man commercial refrigeration, air conditioning with following abilities: application engineering, promotional and merchandising, executive and personnel experience, ambition, business experience, handling of distributors and all types of manpower, credit experience, sales volume production; interested in position with manufacturer or distributor. Best references. Must offer future. Box 1600, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

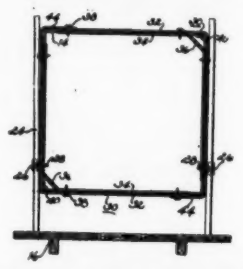
LONG ESTABLISHED refrigeration business in Los Angeles. Representing national manufacturer as distributor. $25,000.00 required. Box 1593, Air Conditioning & Refrigeration News.

Patents (Cont.)

(Concluded from Page 30, Column 5)

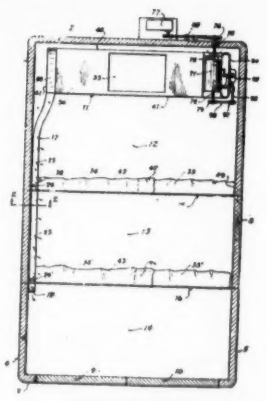
transferred for exhausting the non-condensible gases to the atmosphere.

2,353,883. REFRIGERATING APPARATUS. Ernest Dickey, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application March 31, 1942, Serial No. 437,094. 5 Claims. (Cl. 138—78.)



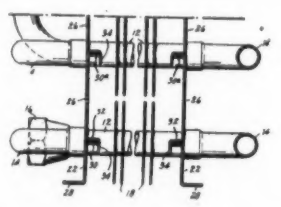
1. Duct means comprising a plurality of non-metallic conduit sections held together by a sheet metal connecting device, said sheet metal connecting device comprising a first strap member in engagement with the outer surface of the conduit sections, a second strap member secured to said first strap member and arranged in engagement with the inner surface of the conduit sections, one of said strap members comprising an integral reinforcing corner brace extending across an inner corner of said conduit.

2,353,909. TRUCK REFRIGERATION. Eric W. Lager, Chicago, Ill., assignor to Industrial Patents Corp., Chicago, Ill., a corporation of Delaware. Application Sept. 30, 1940, Serial No. 358,943. 8 Claims. (Cl. 62—24.)



1. In a refrigerated vehicle, one or more curtains substantially impervious to the passage of air therethrough for dividing said vehicle into a plurality of transverse sections, means for slidably suspending said curtains from the ceiling thereof, and means for fastening the outer edges of said curtains to the walls of said body, said curtains being of a length sufficient to permit a substantial portion to lie upon the floor.

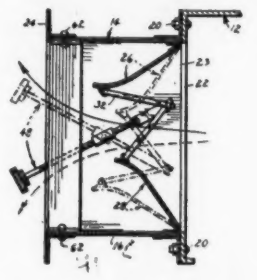
2,354,131. REFRIGERATING APPARATUS. Lester U. Larkin, Chicago, Ill., assignor to Lul Products, Inc., Baltimore, Md., a corporation of Maryland.. Original application March 19, 1938, Serial No. 196,881.. Divided and this appliaction Aug. 28, 1941, Serial No. 408,564. 2 Claims. (Cl. 257—255.)



1. End plate structure for a tube heat exchanger including a plurality of sections having edges meeting along the center lines of the tubes, the edge of one section being formed with a U-shaped flange having spaced apertures, and the adjacent edge of an adjacent section being formed with a flange adapted to be received within said U-shaped flange and with projections adapted to extend through said apertures.

2,354,155. OUTLET DEVICE FOR AIR-CONDITIONING SYSTEMS. Edwin Sternberg, New York, N. Y. Application Dec. 29, 1941, Serial No. 424,688. 5 Claims. (Cl. 98—40.)

1. An outlet for an air duct of an air conditioning system, comprising a casing having an inlet opening and an outlet opening, a nozzle comprising a pair of vanes for controlling said inlet opening and for directing air through said outlet, means mounting said vanes for pivotal movement, said vanes being movable on their respective pivots from positions in which they cover said opening to positions in which they uncover said opening and to a plurality of intermediate positions for regulating the size of said opening, each of said vanes extending radially from its pivot toward the companion vane and terminating in a free end spaced



radially from said pivot, the free ends of said vanes being adjacent each other when the companion vanes are in said covering positions thereof, and being spaced from each other in said uncovering and intermediate positions of said vanes, means connected to said vanes between their pivots and their free ends for moving said vanes on said pivots for covering and uncovering said opening, and means for moving said vanes on their pivots in the same direction relative to each other to adjust the air-flow directing positions of said vanes when said vanes are in said uncovering and intermediate positions thereof.

For: TRUCKS, LOCKERS, COOLERS, COUNTERS AND CABINET CONVERSIONS, use:
KOLD-HOLD PLATES
KOLD-HOLD MFG. CO.
LANSING, MICH., U.S.A.

Export Representatives And Service Engineers

Large domestic and commercial refrigeration manufacturer doing world wide business is interested in interviewing men with good background for both retail and wholesale selling, also servicemen for employment abroad postwar. Write giving full details, experience, and references. Box 1584, Air Conditioning & Refrigeration News.

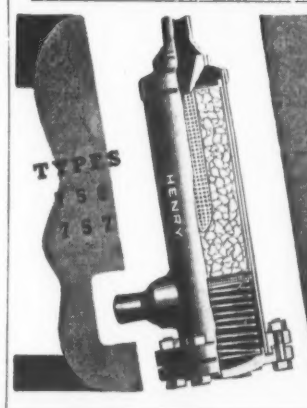
ONE SERVICE MAN TELLS ANOTHER HOW

ICE-X quickly cures emergency freeze ups when ice forms at the expansion valve or capillary tube. Harmless to use. Great for Freon, Carrene, or Methyl Chloride systems . . . The dependable liquid anti-freeze.

ORDER FROM YOUR JOBBER OR—

EXCLUSIVE NATIONAL DISTRIBUTOR
THE HARRY ALTER CO. 1728 S. MICHIGAN AVE. CHICAGO 16, ILLINOIS
JOBBERS: WRITE FOR SPECIAL PROPOSITION!

LARKIN COILS, INC. 519 Memorial Dr. S.E. Atlanta, Ga.
LARKIN Refrigeration Products
Write for New Catalogue
Originators of The Cross Fin Coil



HENRY
CARTRIDGE DEHYDRATOR
With Side Outlet and Dispersion Tube

This exceptional design permits easy removal and replacement of cartridge without loosening end connections. Dispersion tube for increasing drying efficiency and minimizing pressure drop is incorporated as integral part of refill cartridge.

Ask your jobber for it.

Filled With Silica Gel or Activated Alumina

HENRY VALVE CO. 1001-19 N. SPAULDING AVE. CHICAGO, ILLINOIS

Beat the Summer Rush
WITH
RANCO TYPE KWS REPLACEMENT CONTROLS

When temperatures soar and equipment is taxed, the service engineer is apt to find himself flooded with calls. That's the time to standardize on Rancostats Type KWS for speedy installations to be proud of—in water coolers, ice cream cabinets, domestic refrigerators, etc. KWS features include: beautiful stainless steel case; single pole, snap-acting switch; outside service indicator for limited range adjustment; outside differential adjustment; user adjustment; push-pull on-and-off switch; adjustable mounting brackets; overload mechanism. Ask your Ranco Jobber to show you these and other Ranco domestic and commercial replacement controls.

Ranco Inc. COLUMBUS, OHIO

OPA Sets Price Rule For 'Surplus' Goods

(Concluded from Page 1, Column 3)

March, 1942, continues the institute bulletin.

3. A statement of maximum charges or pricing methods must be prepared and kept for examination by any person, and a duplicate of this statement must be filed with the firm's local war price and rationing board.

4. If the firm's maximum prices for material and parts are based upon a manual or catalog, the firm may clearly identify on its price statement the manual, parts catalog, or price list by name, edition, number, and date, instead of including in its price statement all of these retail prices. This price statement should also include percentage of markup on costs of parts, if that was the firm's practice in March, 1942.

5. If the firm has customarily given sales slips or receipts, the OPA regulation requires that it continue to do so, but regardless of past practice, a firm is compelled by the regulation to give an itemized sales slip to any customer who requests it.

6. The term "service" now includes the rental of commodities, so any firm renting appliances must also file its rental charges with OPA.

7. All persons covered by pricing regulation are automatically licensed, and this license may be suspended for violation of any of the applicable regulations, points out the institute bulletin. If a firm's license is suspended, the firm may not make any sale during the suspension period for which its license has been suspended.

8. If a firm fails to keep its price records or file statements with the OPA, the latter may issue an order establishing maximum servicing prices for the firm, in line, of course, with the prices established by the regulation.

9. Previous provision for increasing a firm's ceiling prices because of overtime work, increased labor costs, or up to twice the firm's basic hourly wage rate, still apply, the bulletin declares.

Motor Distribution Now Regulated

(Concluded from Page 1, Column 5)

easily readable lettering:

"This motor allocated by WPB and to be sold and used only as a replacement, or for use by a farmer. See WPB Order L-341."

Any dealer, repair shop, or consumer who receives a motor thus identified, must not knowingly deliver, install, or use it except to replace a worn out or defective motor, or for use by a farmer. The marking shall not be removed until the motor is installed.

After Aug. 15, 1944, no distributor may deliver any commercial motors obtained with a WPB-547 rating if he knows or has reason to believe that the motors will be resold or used for any purposes except for replacement purposes, or for use by a farmer.

CRMA Making Plans For Reconversion

(Concluded from Page 1, Column 4)

of production on a limited basis will be possible soon after that date.

C. V. Hill, Jr., of C. V. Hill & Co., was re-elected president of the CRMA. Members of the executive committee named for the coming year include A. J. Johnson, Puffer-Hubbard Mfg. Co.; J. H. Coolidge, Sherer-Gillett Co.; Charles Dieringer, Federal Store Equipment Co.; and W. B. McMillan, Hussmann-Ligonier.

In order to determine specific policies to aid individual manufacturers in restoring normal operations, a Postwar Planning Committee composed of the following was named: Mr. McMillan, chairman; Jerry Tyler, Tyler Fixture Corp.; J. W. Hart, McCray Refrigerator Co.; and Mr. Coolidge. W. J. Stelpflug of Hussman-Ligonier Co. will act as counsellor to the committee.

Dealers Can Share In 'Complete Home' Plans

(Concluded from Page 1, Column 4)

insurance under the realty mortgage; refrigerators in 41; dishwashers in 40; garbage disposals in 34; and automatic washers in 18.

The program has met with some opposition, notably from the National Retail Furniture Association, which expressed the fear that such long-terms for home buyers will begin a trend towards small down payments and extra-long terms on all sales of household equipment.

Commercial Parts Out Of Inventory Order

WASHINGTON, D. C.—Repair and replacement parts for commercial refrigeration equipment and materials or finished goods sold to a supplier under Priorities Regulation No. 13 are exempt from Suppliers' Inventory Limitation Order, L-63, WPB reported Aug. 8.

By amendment, L-63 includes the above items in List A, which specifies goods not defined as "supplies" within the meaning of the order. L-63, in force for more than a year, established supplier inventory controls for such items as electrical supplies, hardware supplies, automotive supplies, plumbing and heating supplies, and restaurant supplies.

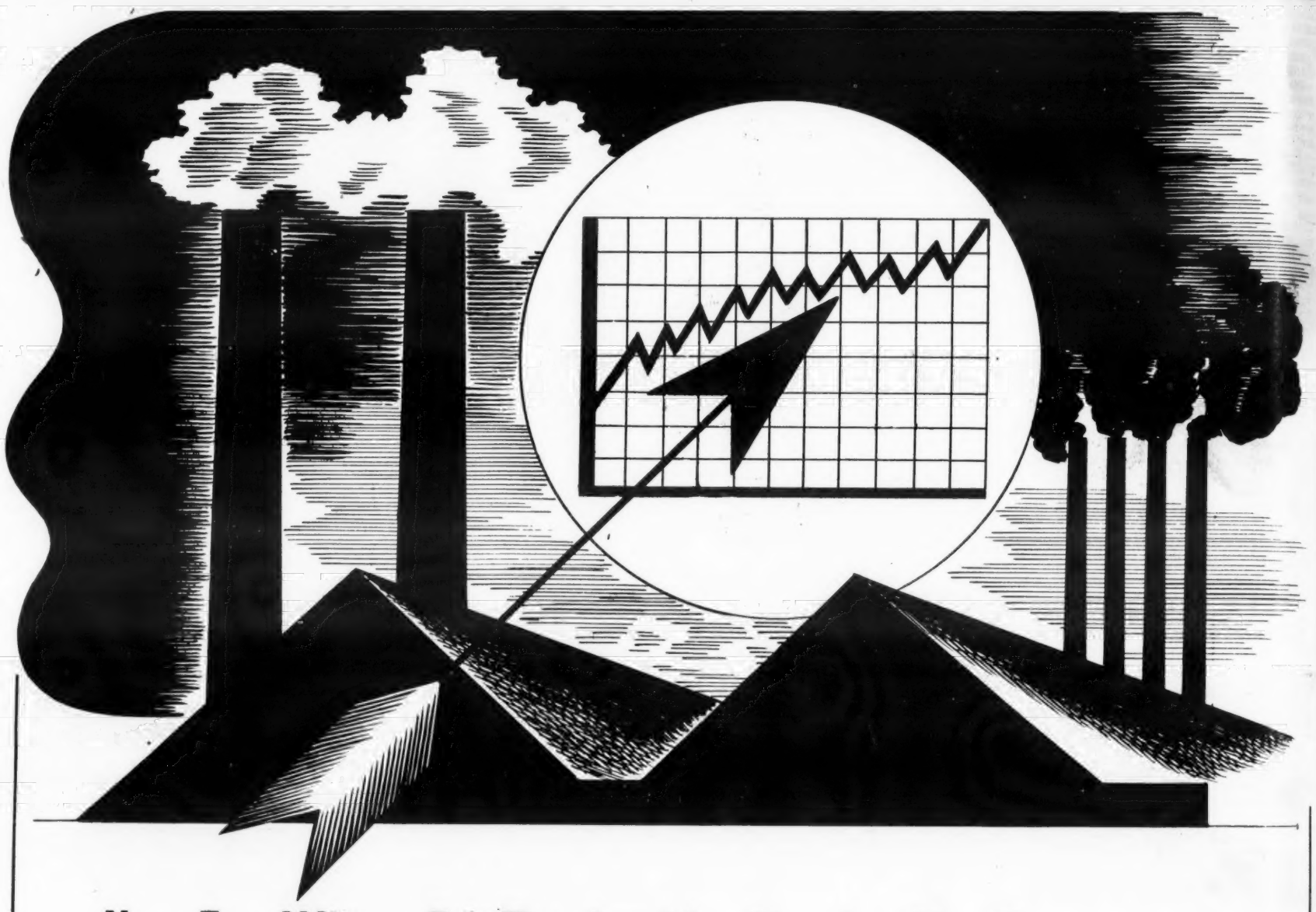
Clark Bridgman Forms Own Sales Company

(Concluded from Page 1, Column 5)

Bridgman's organization will include Michigan, Indiana, Missouri, Kansas, Illinois, Iowa, Wisconsin, Minnesota, North and South Dakota, and northern Ohio.

Main office of the firm will be located in Chicago, and complete engineering and sales service will be offered from that point. Representatives of the company will be located at various central points in the territory.

Before joining the Bush organization, Mr. Bridgman had been commercial sales supervisor for the Frigidaire branch in Springfield, Mass.



NEW STIMULUS . . .

One need not be the seventh son of a seventh son to read the future. It's clear as crystal. Life will be better, safer and longer because of refrigeration.

Dr. William Petersen of the University of Illinois, who has spent twenty-five years studying the relation of temperature upon health, asserts that health is impaired, life definitely shortened, by temperature extremes. The answer: Air Conditioning.

Industrial efficiency, too, involves refrigeration. The life of a tool, for example, can be increased from 28 pieces between grinds to 100 pieces between grinds . . . merely by subjecting the high-speed tool steel to low temperatures (-80° to -120°). Proof of this superior hardness produced by cold treating has been established by G. B. Berlien, distinguished metallurgist. Mr. Berlien predicts that every tool hardening room in industry will soon have low temperature refrigeration.

As for home freezers, locker plants, milk coolers, and the many other markets awaiting post-war boom . . . it's all just around the corner. Let's be READY.

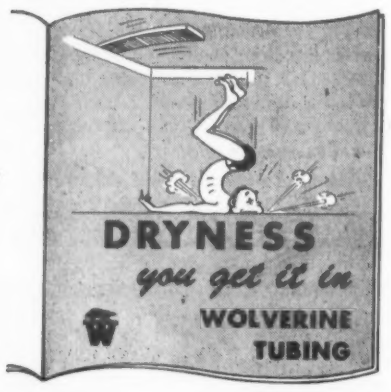
The Bush Manufacturing Company, Hartford, Connecticut. 415 Lexington Avenue, New York. 549 W. Washington Boulevard, Chicago. **BUY WAR BONDS.**

PENGUIN PETE

BUSH

HEAT TRANSFER PRODUCTS

EXPORT ADDRESS: 13 EAST 40TH STREET, NEW YORK. CABLE: "ARLAB"



In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber
since 1928
Your letterhead will bring our latest catalog—also our House Organ, "The Liquid Line"
3109 Beverly Blvd.
LOS ANGELES 4, CALIF.